5-1-1920

Special Libraries, May 1920

Special Libraries Association

Special Libraries

Vol. 11 MAY, 1920 No. 5

The Special Library and the Corporation School

Little has been written in the past upon the value of the special library in aiding corporation schools. To be sure special libraries are in a certain sense of the word an educational forces, yet few special libraries have attempted anything in an organized way to either aid the many corporation schools now existing, or to present any reading course directly bearing upon the work of the organization in which they exist.

Public libraries through so-called extension work have attempted to aid the worker by providing special rooms with special attendants in charge. Through this agency much has been done to aid the wage-earner, but through the very generalness of their charge public libraries cannot get at specific employees and meet the specific problems of each plant. The special library is the only agency that is logically situated to fall in line with corporation school methods.

Corporation schools are an established thing in many of our largest concerns, as is witnessed by the extent of their work shown in the pages of the Annual Reports of the National Association of Corporation Schools.

The significance of this form of education is of very great importance at this time in our industrial fabric. Its results are twofold. First is the direct educational gain of the "job in hand," and second is the general educational feature which leads men to the larger phases of their work and indirectly to the larger phases of life.

With our ever-increasing large scale production and consequent specialized operations employees' minds become almost as automatic and limited as the operations they perform. As Mr. Wadlin has said, "No man whose time is principally occupied in work can become interested in the books which the library furnishes without having his life broadened. One of the industrial evils of the day is the tendency to reduce earners to a common level, to a merely routine performance of duty. The influence of the library counteracts this tendency.

There is a considerable field here for increased activity and an opportunity to help labor help itself.

That little or nothing has been done along this line is shown by the report made by the National Association of Corporation Schools on the "Library Method" Special librarians should find this report reprinted in full of considerable interest.

THE LIBRARY METHOD

(National Association of Corporation Schools, 1918, pp. 106-8.)

There are only three sources of information: Teachers, experience and books. It is not necessary to discuss which of these is the most important, but since a very large part of all worth-while knowledge is put into printed form, the importance of a library in any educational plant is apparent. It is necessary to determine whether the corporation has a company library or whether it depends on outside institutions for its books. The reports collected, however, show that few corporation schools have anything like adequate library facilities. This condition may be due to the fact that our schools depend very largely upon experience as the means of education, but to depend upon experience and teachers alone is a narrow view, and it is recommended that library facilities be supplied wherever possible.

A definite idea as to how the library is built up, whether by gifts, loans or purchase, would determine in a way the stability of this method of instruction; what portion is strictly technical and what general, would indicate the relation of the number of books which are used for purely company service and those which are cultural in extent. The hours during which books in the company library are available should be as long as possible. Business hours may not be as advantageous as would appear on the surface, as unless the empolyee has free time to make use of the library no direct benefit is received.

The basic principles which enter into the Library Method are:

1. Books constitute one of the chief sources of knowledge.
2. Text-books and lesson sheets should always be supplemented by required reading upon assigned topics.
3. Part of the recitation period should be given to reports on this supplementary reading.

4. Assignment of supplementary reading should be by exact topics and exact page citations.

5. Special reading assignments of important topics should be made to capable students, according to their ability and individual interests.

6. In such investigations, students should be trained to pursue standard bibliographical methods.

A company library which keeps an index record of magazine articles and clippings will certainly make available specific data which would otherwise be out of the question. Careful indexing of important information eliminates the possibility of students' omission of an entire magazine. In the student's zeal for the value of real first-hand experience, he overlooks the fact that profiting by the experience of others is equally important, and books and periodicals are the storehouse of other men's experience; hence any teacher is neglecting his duty who does not keep in touch with the literature of his subject and fails to teach his students how to find and utilize this literature.

However good any text-book or magazine may be, there are always opportunities to vitalize the lessons with supplementary material, upon which special reports are made by those students whose interests lead them in this direction. There is no doubt but that assigned readings not only for each class subject, but also for each field of work, will be of available assistance in converging the ideas of the student-employee's mind to the particular work at hand. It will tend to focus his thoughts and prevent the possibility of waning interest in a conglomeration of facts. It is well known that a student will learn much more when a lesson is assigned to him than when he is permitted to read on his own responsibility. It should be borne in mind that next in importance to knowing a thing is the ability to find out and give to proper training in the use of technical books as a source of information. This is not the least important part of a teacher's task. Points to be kept in mind in administering this phase of the work are:

1. A clearly defined topic or problem upon which information is desired.

2. Independent search on the part of the student for printed discussion of the assigned topic.

3. The necessary sorting of relevant material from the irrelevant.

4. Independent organization of this relevant material in the form of extracts or briefs.

We are now more or less acquainted with the class of students usually met in corporation schools. Class, however, is not the determining factor in the matter of guiding the general reading of the employee. It is surely just as important that the students be well read as it is for them to be trade learned. Good cultural reading will open the student's mind to a larger field, resulting advantageously for himself as well as for the company. To gain this end, it would be a good thing to have the educational department of the corporation arrange to secure general literature for the employees' use. Furthermore, there will certainly be some ambitious students who may wish to purchase their own text-books in order that they may be readily available for reference. This should be encouraged, but not to such an extent as to financially embarrass them.

Should the educational work be conducted on a sufficiently large scale, it would be best to have a trained librarian who could devote his entire time to the work. In smaller organizations probably some one of the officials or a member of the office force could devote part of his time to the library. Funds should be available for the maintenance of the library and for the propagation of its extended use in connection with the Library Method of instruction.

Film Libraries.

The picture film has come to stay, for it is meeting a real need. It supplies what is on the whole, good amusement at a reasonable price. It has high educational value. It can convey lessons with directness, precision and emotional appeal. It can record what is not for a day but for all time. The governments of today are using it to register war scenes. How valuable these will be in the future! How much one would now give for a film of the historic review under the Washington Elm on Cambridge Common! How greatly will the British Empire treasure that film of America's soldiers, marching across Westminster Bridge last year—emblem and seal of a great reconciliation!

But the film needs to be made public property. It has been commercialized, and though regulated, has not become the property of the people. Yet it is essentially "a collective commodity." It can only be made available to a group. An individual may buy a book and go away in solitude to read it, but a film must be enjoyed in common. Even the millionaire of Fifth Avenue or Back Bay who builds a picture theatre in his mansion for a hobby has to invite his friends to make the display enjoyable.

Hence, just as we have public libraries of books, we need public libraries of films. The best films. The best films, or selections, dealing with subjects of social welfare could be collected and made available for schools, churches and other agencies. By this means there would be prepared a great instrument for the Americanization of the foreign-born, the inculcation of democratic sentiments and the furtherance of a finer civic life.

Summary of the Eleventh Annual Convention

The first Convention in the new decade has come and gone. That it was a successful convention no one will deny. From the opening of the Reception to the close of Saturday morning's sessions everyone was enthusiastic.

Despite strikes, members of the Association began to arrive on Monday, so that by the evening of the reception we had one hundred and eleven members present.

Our genial "Judge Redstone" and his hospitable Reception Committee worked with a vim, and in short order good fellowship reigned supreme.

Promptly at eight-thirty all marched into the Banquet Hall where a never-to-be-forgotten banquet was served. Surely no one can say that special librarians are not a live body if actions at the banquet mean any indication of the vitality of this body of workers. One had to but watch the Grand March and the dancers dancing to one of "Doc Johnston's" waltzes to see that librarianship had been left in the various libraries and the good folks were in for a good time.

The first session on Thursday morning opened in the attractive Winter Garden. Over one hundred members were present when the President took the chair. For a moment the President was embarrassed, as she could find no gavel to convene the meeting with. The embarrassment was momentary only, for before the President could call for a gavel Mr. Marion stepped forward and with a very appropriate message presented the President with a gavel, the gift of the past presidents. What more fitting gift could have been given at this time; our first meeting in the new decade, and our first meeting held as a separate body?

With the Association's own gavel the meeting was called to order and the business of the morning proceeded.

The President's message is printed in full in this issue. This message is one that all librarians, not only special librarians, should read. Its message should go outside the profession as it points the way to new opportunities for wide awake and far-seeing young men and women in a new field as yet, with its great potentialities scarcely developed.

The Secretary's report was of great interest to us all. The amount of work handled through this office is clearly indicative of what a responsible position it is. This Association has been fortunate, indeed, in having the secretaries it has had, for it must be remembered that all the work done for this Association is entirely voluntary and must be done, for the most part, outside of business hours. Everyone should support the Secretary-Treasurer by every method he or she can.

Following the Secretary-Treasurer's report came the report of the Chairman of the Census Committee, by Mr. William F. Jacobs. Much credit is due to Mr. Jacobs for the launching of a "drive" that has already brought much interesting information and that has given this Association considerable publicity.

For the benefit of those not present we restate Mr. Jacob's urgent request that librarians themselves cooperate with him in filling out the information desired for their own libraries and for any others that are thought to be unknown to this Association.

The basis of a well defined publicity campaign was given by the Chairman of the Publicity Committee. Among the factors mentioned for good publicity was the indexing of good speakers and the designing of a model portable special library, illustrative of the accepted methods of treatment for library material. This exhibit should also be accompanied by a competent lecturer and advisor.

Perhaps of most interest to all members of the Association is the report of the elections. The results are to be found in the following officers: President, Mr. Dorsey Hyde; 1st Vice-President, Miss Hemphill; 2nd Vice-President, Ralph L. Power; Secretary-Treasurer, Miss Estelle Liebmann; Assistant Secretary-Treasurer, Miss Wells. The Executive Board new members are Edward H. Redstone, to serve for two years; Miss M. A. Carabin, for one year, and Miss Norris, appointend to take the place of Mr. McClelland, resigned.

Scarcely less important than the election of officers for our own Association was the election of the Special Libraries Association's representatives on the American Library Association's Enlarged Program Committee of Seven. The Special Libraries' choice was William F. Jacobs, Miss Elizabeth V. Dobbins, J. H. Friedel, and the seventh member, Mr. Dorsey Hyde.

The reports of the other committees will be printed in the June issue of Special Libraries.

The various exhibits held were reported to have been very profitable and interesting. The Miniature Industrial Library, organized and displayed by the generosity of the General Electric Company, was unique. The method of extracting the subject matter out of books was cleverly carried out by enlarging a portion of "Machinery Encyclopedia" and printing same on an enlarged dummy book. From the paragraph heads red rib-

bons were run to the catalog card that showed the standard method for bringing out minute information in books. Ten selected books were placed upon the shelves in this Miniature Industrial Library and fully cataloged. Trade catalogs and pamphlets were exhibited, showing the proper way in which to handle these two classes of material. Pictures of representative industrial libraries were shown in this booth.

Through the cooperation of Miss Draper, of the Bureau of Chemistry, a group of government publications of interest to business was exhibited.

In the Engineering Library booth the three libraries of the E. I. DuPont de Nemours exhibited miniature collections showing how this class of material is handled. These three exhibits were further augmented by the interesting exhibit of the Western Electric Company's Engineering Library.

The Model Financial Library was contributed to by the National City Bank, National Bank of Commerce in N. Y., the Chemical National Bank, The Guaranty Trust Co., the Mercantile Bank of the America, the Bankers Trust Co., and the J. P. Morgan Co. The material on file at this exhibit was visited frequently, and many people benefited materially.

The Standard Statistics exhibited their services found useful to the business man.

Much interest was also shown in the exhibits of the Lefax people and the Prentice-Hall's various services.

The forms gathered by Miss Cox, for exhibiting at the Convention, were displayed in a most attractive manner and proved to be one of the important exhibits of the Convention. These forms are now on file at the Pratt Institute School of Library Science, under the care of Miss Gooch. They will be kept there for the benefit of the students and for librarians in general. All those who did not contribute to this exhibit and who have special forms, are earnestly requested to forward copies to Miss Gooch, where they will be kept permanently on file.

Mr. H. W. Wilson exhibited some of his "stock in trade," Gaylord Brothers had a goodly display, the Library Bureau contributed to the exhibitions, the Safety Institute placed a very interesting display in the Winter Garden. Among the publishers exhibiting were: D. Van Nostrand, Wiley, McGraw-Hill and the Bankers Publishing Company.

This Association is further indebted to the General Electric Company for the use of a Steremotograph Aided by this machine all those who visited the Convention were enabled to visit the libraries of the General Electric Company, Scovill Manufacturing Company, Eastman Kodak Company, Detroit-Edison Company, Marshall Field Company, New Jersey Zinc Co. of Pa., National City Bank, Western Electric Company, Applied Science Room of Pratt Institute Free Library, and the Los Angeles Technology Department collections shown by the lantern slides contributed by these libraries. The magnitude of the organizations served by these libraries was shown by additional slides of the various plants owned and operated by the above companies. This machine contributed much to the meeting.

Through the generosity of the various members of the Association, lantern slides were made up for advertising this Association. Under the direction of Mr. Marion, pertinent paragraphs were reproduced on slides and displayed at the Convention. These slides are on file at the Managing Editor's office and may be borrowed by any member of the Association for publicity purposes.

The last session in the new decade was fittingly held in the Assembly Room of the Merchant's Association of New York, on the 9th floor of that world-renowned Woolworth Building for in the Assembly Room of the Merchants Association of N. Y., back in November 5th, 1909, the first "called" meeting of this Association was held. Many went away feeling that our growth and worth has been as monumental in proportion as has been the change in the Merchants Association quarters.

PRESIDENT'S ADDRESS

This splendid response to the convention call of the Special Libraries Association is highly gratifying. An examination of the attendance register will shaw that the library profession has sent forth some of the "best ye breed." Each person here in attendance symbolizes a vote of confidence in this Association. Firms and individuals of all parts of the United States express their confidence in the Association by their very act of encouraging you and me to attend this convention.

In the shadow of this superb trust, it seems quite fitting that this membership propose to itself the questions, "Whither is this Association tending? What specific things is it aiming to achieve this year? And what, next year? When the next epoch has rolled around, what may we see, in retrospect, to have been accomplished by the Special Libraries Association?"

Our constitution states that we exist to promote the interests of certain types of special libraries. But what of a definite nature are we, as an organization, doing for the technical, or the industrial, or the other types of libraries represented in our membership? Our smaller and newly organized libraries may derive, to be sure, organizational aid from our larger and firmly established older libraries; but what of substance is this Association able to give to these older libraries whose interest in physical equipment and routine methods is their least concern; and, what seems to me the most legiti-

mate and weighty challenge of all, what is this organization doing in the interest of the business which each of us represents? (I use the word "business" in an elastic sense, regardless of whether the business be welfare, legislative, commercial or what not.) In succint form, the question which is propounding and pounding itself right into the consciousness of this organization is "what nature of superstructure are we going to build upon this very excellent foundation?"

We have in our membership a nucleus which can effect a tie-in with the business of the entire world. What shall we make of this vast potentiality? When we contemplate any institution, business or educational, certain policies instantly marshal themselves to the forefront of the mind, and we call the complex which we formulate, its character. Our banker members, for example, could sketch the character lines of the American Bankers' Association, what it stands for, what its policies, and what its latitude. Similarly, our legislative members could analize the American Bar Association; and our engineer members, the various engineering societies. It would seem that this organization had now arrived at an age where we may, with a proper sense of fitness, ask what does the name SPECIAL LIBRARIES ASSOCIATION connote, to its members, to its fellow organizations, and to the general public? What are its character lines?

During the past few months, I have been balancing these questions in the light of a varied mass of evidence. I do not wish, however, to impose my personal conclusions upon this membership. What this Association should be, and where its substructure needs strengthening are questions which will provoke a divergence of opinion, and should draw their answers from the counsel and experience of the entire membership.

It is my personal feeling that we have in this organization an unexplored, unchartered sea in which there resides a wealth of usefulness; and that, by proper co-ordination of talent and organizational genius, its resources can be developed and thrown into the channels of business with a telling effect.

OBLIGATIONS TO BUSINESS AND RESEARCH IN GENERAL

If an analysis were made of the composite aspirations which characterize this association, I believe it would reveal that the preponderant demand of the membership is that this association enter upon what might be termed an "extra-mural" policy. For the past ten years this membership has concerned itself, and rightly so, with becoming conversant with the character of the numerous special libraries of the country, and with exchanging ideas upon methods of organization and procedure within these libraries. The activity of the Association has been largely an intra-mural one. It now appears that in entering upon the second epoch of its existence, this Association should break thru the walls of its own immediate environs and direct its efforts toward effecting a more intimate amalgamation with the various classes of business typified by its membership.

Business research groups are at every hand demanding consciously or unconsciously what this association has in its power to give them. The composition of this Association is such as to make it the logical coworker of these numerous research bodies thruout the United States. In theory, this association typifies entrée to the most complete information in existence pertaining to any business, and as a result is peculiarly fitted to comprehend the angle of vision of the research group attached to any business. We have in this association, a body singularly free from the exigencies of unwieldy systems of boards, controllers, and a multiplicity of allegiances; it is a body which dares to be partisan as to what particular phase of knowledge it shall concentrate upon, and which dares to eliminate from the equation the pursuance of certain phases of general knowledge, according as policy dictates; it dares to express an opinion as to the value of informational data and sources, and to reject them if policy dictates. This Association is in such a position that it may devote an entire year, if need be, to assembling and educing authentic original opinions and experiences upon the status of a single subject; and tho we had done only one piece of work in that year, and it bore the stamp of finality, thoroness and dependability, we should have performed a genuine and effectual service to every business touched by that particular subject. Is it not within the province of reasonableness that the business constituents represented in this membership may look to this organization for service of this description?

In the various research groups which this membership represents, we possess feeder lines of specialized information which may be caused to discharge into a common repository. Thru this system we have means of ascertaining on one hand what research and the best thinkers the nation over have accomplished or are working upon in the way of specific contributions to any particular art; on the other hand, we have the means of knowing definitely what research groups lack in the way of specific information. Further, and this is the point I wish to stress, we have the agencies which can make for improvement upon the present insufficient and inadequate means on the part of publishers for ascertaining the needs of research. Beyond that, we have the instruments which can overcome the inertia and wholly unconscious selfishness on the part of investigators in releasing results of investigations now

accessible only to limited, closely circumscribed groups. In metaphorical language, this organization thru its vast network of transmission lines, able to know what information is in existence on the positive side of the system, able to know what information is lacking on the negative side, should take its stand in the region of the two poles and throw the switch that completes the circuit. It should stand as a positive force at that gap between publisher and scholar, now so inadequately bridged, and exert a positive pressure in shaping and improving the quality of published matter.

OUR OBLIGATIONS TO BUSINESS AND RESEARCH AT THE ANNUAL CONVENTION

Back of every special library represented in this membership there stands a research department of some description, concerned with some or all of the conditions peculiar to each individual business. The total membership of this association symbolizes a highly differentiated and specialized species of students.

It is my opinion that in the deliberations at our annual conferences and in our publications we tend to disregard our obligations to the real substance of special library work, our obligations to these research departments. So far as the chronicles of our annual conventions record, it is impossible to deduce from any of the proceedings what technical questions are the particular concern of the steam power plant research units, the vacuum tube units, the income tax units, and so on. When higher steam pressures in steam turbines has been the absorbing topic among the power plant men for the past year, or cinder concrete amongst the builders, or batik tapestries amongst the artists, here in this assembly should we find groups discussing higher steam pressures, cinder concrete and batik tapestries, in place of the venerable themes of catalogs, pamphlet binding and disposition of clippings?

BETTER LIBRARIANSHIP

This general condition introduces me to an allied point, namely, whether librarianship as we know it today is capable of a thoroly sympathetic appreciation of the problems which it purports to assist its patrons in solving.

I have made it a point, at different times, during conversation with what might be accepted as a fairly typical class of men, to learn their attitude toward libraries and librarianism. One person was an engineer of some national repute; another was a physician, a one-time commissioner of health in one of the first six cities, and a sociological authority of some parts; another was a departmental chief in a large chemical manufacturing house. All were men whose education consisted of no less than seven years of college or university. Their composite view was: (quoting partly verbatim and partly not) "Library work is all right for women; their excellence in detail work and the fact that they are satisfied to do it over a long period of time, makes it a work admirably suited to their capacity. Women librarians, however, never can hit in the pinches. When you find a man in library work he is generally one of two types: he is either doing that work temporarily and just long enough to tide him over an emergency, or he is a round peg in a square hole and wouldn't fit any where else in the scheme of things. The average librarian rarely comprehends your point of view."

This is rather a drastic diagnosis, but if its publicity constitutes a contribution to library surgery, its indelicacy may be somewhat palliated. Doubtless, each of you have heard and resented similar derogatory comments. Stripped of their outer integument they may serve to stimulate two lines of thought. Firstly, they reveal in part the formula by which the men quoted would construct the ideal librarian. They would have librarians capable of fuller and more sympathetic comprehension, they would have them less concerned with the detail and more with the substance of their work, they would have them "pinch hitters." Secondly, the reflections cited should stimulate us to inquire into the contributory causes of this impression. Does librarianship make the individual a misfit? Or, does the misfit gravitate to librarianship? Does the preparation for librarianship so prune and stulify him as to make of him a negative factor, a revert from the accepted social and business type, a person for whom many allowances should be made? The interrelated reaction of the librarian upon the patron, and of the profession upon the librarian is one which this body may well take cognizance of, with a view to ascertain the facts and eradicating undesirable tendencies.

A HIGHER CONCEPTION OF THE PROFESSION

In conducting such a survey it occurs to me to suggest that we inquire whether, with librarians, the idea of service has not become distorted and exaggerated. Have we by concerted will become servile instead of serviceable? May we not catch a new and higher conception of our profession, namely: service with scholarship, service with poise, service which commands recognition, service in which is lodged not alone a knowledge of the "sources" but a knowledge of the subjects themselves? The special librarian, to command the proper sort of recognition from the best thinkers of his constituency, should strive for the privilege of studying and knowing the intricate problems which concern every department of his business. And this same should be true of every librarian whether he be chief of a division in a large library, or library executive in a smaller library unit. The responsible chief of any

section can not at one and the same time, do the actual work of the department and keep his conceptions on the broad plane necessary to direct a library creditably. It has been my observation that this is the very thing that a large majority of the special library profession is struggling to do. And it is my further conjecture, that this is true, not because their employing organizations create the conditions, but that they themselves are so lacking in self-assurance and business tactics as to be unable to surmount them. The more a library executive remains in his narrow confines, the more completely his ability and desire to know the circles concentric with his own, atrophies. Can you conceive of anything more discordant than a business librarian attached to a corporation and totally untutored in the unwritten code of business tactics, business decorum and business finesse? Can you sense anything more inconsistent than a librarian, knowing imperfectly or not at all the composition of brass, the structure of the furnaces, and the tendency of the zinc component to vaporize, attempting to supply the wants of a representative brass manufacturer? What would your estimate of a physician or surgeon be, when you laid your case before him, if he instantly made a rush upon a medical variety of *Industrial Arts Index* and assembled before you an imposing collection of references dealing with your particular ail? The kind of intelligent service you expect of the professional surgeon, library patrons in the main would like to expect of the professional librarian. They would like to be able to approach the librarian with a "what do you know" air rather than a "can you tell me where I can find" air. They would like to feel the poise which springs from depth, scholarship, and a genuine grasp of the subject. They would like to be spared the provincialism, the superficiality which results from trying to be "all things to all men." It is time that our library systems undergo a "differentiation of the species" and that patrons may go into our great public libraries and look on the bulletin board and find the recognized Shakespeare authority, the Tennyson servant, the constitutional history scholar, and the chemical expert; it is time that patrons may go into our special libraries and consult the director of the textile library who knows the textile business and the power plant librarian who knows the power generation game. There should come a time in the development years of the librarian when he should stop playing with the general knowledge and accrue intensive knowledge of a specific character. Until this condition is attained librarians will never enjoy even an approach to the confidence of the best thinkers of this nation.

EDUCATION FOR LIBRARIANSHIP

An analysis of the educational training which lies back of librarianship might demonstrate that its principles undergo revision. The educational prerequisites might bear revamping, and specifications for individual fitness grafted on to them. In co-operation with the school system of the country a plan of guidance and counsel might be inaugurated, which should dip back into the freshman year of the library acolyte's high school life and assist in directing his development. We may well consider the development of an apprentice or half-time school for aspirants to library work which shall begin with high school age? Shall we not take steps that the aspirant, from actual contact with library work, may be able to know when he enters college what branch of the library service his especial proclivities incline him? Do we not owe it to special librarianship that the library student know from actual contact some of the demands peculiarly characteristic to special librarianship: business acumen, ability to carry thru an entire investigation from inception to completion, skill in the selection and direction of a working staff.

OPPORTUNITIES AFFORDED IN THE AMERICAN LIBRARY SYSTEM

We are further prompted to speculate just how much of the short-comings of the vast army of library workers is attributable to autocracy within the library system. Does the American library system breed a spirit of genuine good fellowship? Is it broad enough to accord us all the right to breathe? Is it large enough to afford us all a place to stand and grow? Is it high-minded enough to be aloof from demagoguery and dictatorship? Is initiative and ambition encouraged by the system, or does it interpret these qualities as being a menace, a dangerous outcropping, a mark of incipient insubordination? Does its ethical code sanction the practice of pigeon-holing and cramping the developmental processes of the aspiring?

We are tempted to contemplate the rank and file of librarians and inquire whether the system has placed them in somewhat the same plight as the serfs of the feudal era; whether, once the librarian succeeds in attaching himself to the system, he withdraws himself from the main current of activity, becomes a grateful recipient of all benefits, and gives himself up to ascertaining the pleasure of the overlord and working diligently in the manner prescribed by him; whether his life rôle is that of a submerged, submissive, ultra-obligating creature, a medley of "all things to all men," his identity suppressed, and escape from his caste inconceivable.

In summation, this Association should concern itself at its eleventh annual convention

Continued on Page 31a

The Educational Standard of Librarianship in Relation to Technology

By Henry V. Hopwood

Up to the present, no attempt has been made to fix a standard of knowledge for librarians in any special sphere except that of literary history, and that subject can hardly be regarded as special, representing as it does the bulk of the mass of literature with which the average librarian has to deal. No claim has been made that he should show special aptitude in the spheres of religion, geography, history, art, science or technology, and any qualifications he may possess in these respects are certified by bodies who examine and certify to his knowledge without any reference to its connection with, or adaptation to, his possession of librarianship. Such certificates vouch for the possession of knowledge; they are no guarantee of ability to classify and index special literature or indicate sources of information. Broadly speaking, the student is expected to carry facts in his brain; the librarian's duty is to know where those facts are recorded in print. Librarianship must therefore remain the foundation of all qualification, and librarians in specialized libraries should be qualified primarily according to the Syllabus of the Library Association Educational Course, that is to say, the staff for a specialized library, or the specialized branch of a general library should be drawn from those already qualified in library routine and cataloguing; a selection being made of those having personal liking and aptitude for the special subject. Instead of trying to turn a student into a librarian, a librarian should be encouraged to qualify himself in the special subject required.

In this matter, Technology, with a necessary accompaniment of a limited amount of Pure Science, presents greater difficulties than most other branches of specialized knowledge. The field is wide, and the requirements of libraries vary greatly. Many libraries have, and indeed can never afford to have anything more than, a very meager selection of technical text-books; while others, though dealing with only one branch of technology, such as electricity or chemistry, contain a wealth of detailed literature. Obviously a uniform qualification is not necessary, nor indeed possible; a graded scheme of qualification would probably encourage a system of advancement from the less to the more specialized appointments.

Bearing in mind that the need is not to test a candidate's scientific and technical knowledge, but rather his capability to deal with the literature of the subject, it would seem desirable to institute, under the auspices of the Library Association, an examination in general knowledge of Science and Technology, in two grades with three sections in each.

Lower Grade

(*a*) Subject cataloguing, and classification of a certain number of scientific and technical works in English, together with a knowledge of the chief divisions of the Dewey and Library of Congress Classifications.

(*b*) A paper designed to test the candidate's knowledge of general scientific facts and technical processes and machines, together with his ability to indicate the class of book to which he would refer for further information.

(*c*) Translation *out of* French or German, the passages set being easy paragraphs from elementary technical text-books.

Higher Grade

(*a*) Subject cataloguing and classification of English (50 per cent), French (25 per cent) and German (25 per cent) technical and scientific works, a certain proportion of them being pamphlets, theses, and trade catalogues. Capability to annotate should be essential.

A thorough knowledge of the scientific and technical sections of the Dewey, Brussels, and Library of Congress Classifications, together with the subject headings of the latter library should be required, also a knowledge of special expansions.

The candidate should be able to explain the scope of selected headings, to differentiate in allotment, criticize selected sections, and suggest expansions.

(*b*) A general knowledge paper, of more detailed character than that in the lower grade, which should also test the candidate's knowledge of technical bibliographies and periodical indexes, and his acquaintance with periodical and society literature, including a recognition of the title abbreviations commonly employed To this might be added a knowledge of the *History* of Science and Technology as distinct from actual technical knowledge. This subject might with advantage form a section by itself, and rank equal to, or as a substitute for, literary history, in which case it should include an acquaintance with the older literature.

(*c*) Translation *out of both* French and German, passages set being selected from more advanced literature than the lower

grade, e. g., dissertations, papers read before societies, etc.

REMARKS ON ABOVE SUGGESTIONS

Section A in the lower grade is designed to test merely the aptitude which the candidate exhibits in Technology. In the higher grade he is expected to grasp the novel and essential points of the documents set before him, and to show this in his annotations.

Section B in the lower grade is designed to test his ability to understand such questions as readers might put to him; in the higher grade his ability to aid detailed search for information should be tested. In this section, especially in the higher grade, the assistance of some prominent manufacturers might be of value in setting the questions. Indeed, a further step would appear desirable. If manufacturers could be induced to permit the visit of selected candidates to their works it would not only assist in the training of the latter but might help to create and foster that reciprocal interest between manufacturers and library which is essential to the success of any technical library scheme.

Section C. This section is merely designed to test the ability of the candidate to interpret correctly the books, etc., passing through his hands; for this purpose translation into, or literary knowledge of, a foreign language are not required. A literary knowledge, though a desirable addition, does not guarantee, in itself, that the candidate will understand a technical treatise. The test should be of his knowledge of terminology, not only in foreign, but in his own language.

The above scheme would insure that combination of librarianship with technical knowledge which is absolutely necessary to a librarian in a technical library. Beyond this the Library Association need not go. Each library, according to its special requirements, might call on members of its staff to obtain one or more of the recognized Board of Education Certificates mentioned in the "Regulations and Syllabuses for Examination in Science and Technology." In the same way any recognized certificate, such as those of the Chamber of Commerce, might be required in foreign languages. It must, however, be repeated, that such certificates are a matter of general education and special library requirement, in which no rule applicable to all libraries can be laid down. The suggestions above are made strictly in connection with librarianship, and embody the minimum which should be required from those dealing with technical books and technical readers. If carried out, they might encourage the progressive training of technical librarians, and gradually bring to the front those of special ability. The field of knowledge is so great that to cover it entirely to any depth would require an immense amount of study, and when acquired it needs to be kept continually up-to-date.

Advanced knowledge of any one subject, as apart from knowledge of its literature, is only required, indeed only possible, in a specialized library. Whether the special subject be mining, electricity, agriculture, or chemistry, no more than a general knowledge of other branches is likely to be required, nor is time likely to be available in which to keep thoroughly abreast of general current research and literature.

For this reason the above scheme, adaptable to all grades, and allowing gradual selection of the more apt, is suggested, and it must be conceded that a librarian who has passed from a general library to one with a large technical section, and from that to one detailed and specialized, who has proved efficient in practice, and has studied in one or more special branches, will be entitled to an adequate remuneration, certainly higher than that which obtains today.

Memorandum on the Organization of Library Exchange Areas

BY ERNEST A. SAVAGE, CHIEF LIBRARIAN, COVENTRY PUBLIC LIBRARIES.

PROPOSAL.

1. The Birmingham and Coventry Libraries Committees, on the initiative of the Birmingham Committee, have adopted this resolution: "That the Librarian be authorized to lend to other libraries, for a short period, books from the Reference Library which are difficult to obtain elsewhere, provided that under no circumstances shall books be lent which could not be replaced."

2. This resolution applies to a vast number of books quite readily replaced by the library owning them, but not easily procurable at short notice by other libraries: such books, for example, as the proceedings of scientific and technical societies and foreign books.

3. As it is desirable that the greatest possible use should be made of books in public ownership, especially of scientific and technical books which are quickly superseded, this arrangement could be extended to other towns, and could be made to include, not only inter-library loans, but inter-library cataloguing.

ORGANIZATION.

4. To extend the arrangement described above it would probably be desirable to organize library exchange areas, each area with a consultative Committee of Librarians of libraries participating in the exchange service. A good example of an exchange area is that covered by Staffs, Worcestershire, and Warwickshire, with Birmingham as center, and the Potteries, Stafford, Walsall, Dudley, Worcester, and other places as associates.

Interim Report of the Council of the Library Association on the Provision of Technical and Commercial Libraries

1. The question of the best methods of developing the scientific and technical departments of public libraries has been under consideration since October, 1916. The scope of the inquiry was afterwards widened by including the collateral subject of commercial libraries.

2. This Report describes the work of the Council to the date of reporting, and includes some recommendations which are submitted tentatively for discussion rather than as an instalment of the final report.

MEMORANDUM TO DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH.

3. The Council have laid before the Department of Scientific and Industrial Research a Memorandum advocating:—

(*a*) The removal of the existing limit to the libary rate, so that local authorities may be free in future to expend upon their libraries the sums necessary for their greater efficiency.

(*b*) A closer union between State and Copyright Libraries on the one hand and Municipal Libraries on the other, so that the resources of the former may directly or indirectly be made available for scientific and technical students in the provinces.

(*c*) That funds should be provided for some State-supported Library, such as the Science Library of South Kensington, or a library controlled by the Department of Scientific and Industrial Research, to purchase books required for research and to make them available for loan to public libraries.

BRITISH MUSEUM.

4. The Council are glad to report that the British Museum Library, through the Keeper of Printed Books, is prepared to act as a clearing-house or centre of final reference for all bibliographical inquiries.

After the war the Department of Printed Books hopes to co-operate with public libraries by supplying photographically-reproduced copies of articles and illustrations in foreign books and journals, at a price covering the cost. (The value of such co-operation may be gauged by the fact that Joseph Hunter's "Chorus Vatum Anglicanorum," a famous collection of MS. material running to 3500 pages, is now being copied for the Newberry Library, Chicago.) It also hopes to be able to print catalogue cards of accessions to the British Museum Library for sale to other libraries.

UNION LIST OF PERIODICALS.

5. The Council have agreed to co-operate with the Panizzi Club in preparing a union list of current periodicals to be found in public and professional libraries of the United Kingdom.

PATENT PUBLICATIONS.

6. The Council have ascertained that most libraries possessing a full set of specifications prefer to continue to receive all rather than a selection of classes. Some other libraries, not receiving the full grant, would be glad to obtain the classes of most service to the industries of their areas, but the Patent Office authorities, for reasons stated in the Memorandum on Patent Libraries printed in the "Library Association Record" for May, 1917, do not recommend this course; for the present then these libraries must rely upon the Abridgment Series and the Illustrated Journal. Few libraries, however, possessing the Abridgment Series receive either the advance sheets of the period in course of publication, or the series of the Fifty Years' Subject index. Both of these publications are of material value for search purposes. They may be obtained on application to the Comptroller-General of Patents. Some expenditure and clerical labor, however, are involved in casing and filing these sheets in class order, and in some cases it might be advisable to apply for a selection of classes most in request in a given district.

INQUIRY PAPER.

7. An inquiry paper has been circulated to libraries to obtain statistical and other information for the Council's use, especially in support of their Memorandum to the Department of Scientific and Industrial Research.

MEMORANDA PREPARED FOR THE COUNCIL.

8. Memoranda by members have also been considered on:—

Patent Publications ("L.A.R.," May, 1917).
Trade Catalogues ("L.A.R.," May, 1917).
Directories and Code Books ("L.A.R.," June, 1917).
Organization of Commercial Libraries ("L. A.R.," May, 1917).
The Philadelphia Commercial Museum.
Training of Librarians for Technical Work.
Library Exchange Areas.
Publicity.
Local Depot Areas.
Co-operation of the Board of Trade Commercial Intelligence Department with provincial commercial libraries.

RECOMMENDATIONS.

SCIENTIFIC AND TECHNICAL LIBRARIES.

9. Certain recommendations are implied in the above account of the Council's work.

As in future public libraries must probably devote a larger proportion of their resources to work more directly useful to industry and commerce, the Council are of opinion that it is of urgent national importance to increase the supply of scientific and technical books and periodicals, the existing supply being quite inadequate for higher research, and, in many places, insufficient for the requirements of the student and the artisan To this end it is strongly urged.

(*a*) that local authorities should afford more generous support to public libraries for the provision of scientific and technical literature;
(*b*) that municipal and other library authorities and institutions should co-operate in issuing union catalogues of technical books, and adopt such other co-operative methods as will make their resources available over wider areas;
(*c*) that a State scientific or technical library should publish periodically a descriptive list of selected books in Science and Technology;
(*d*) that a more extended use should be made of periodical literature by the increased provision of current indexes and digests.

If the rate limit is removed and if measures of co-operation between libraries, whether State—or locally—supported, can be devised, together with better methods of selecting books, and with an extended use of periodicals and their indexes or digests, the Council are of opinion that libraries will be efficiently equipped with the means of assisting research workers and students throughout the United Kingdom.

COMMERCIAL LIBRARIES.

10. In the interests of the domestic and foreign trade of this country, it is desirable to establish commercial departments in libraries in trading and industrial centers. Only the largest towns can support libraries so extensive and highly organized as those of the Institute of Commerce, Antwerp, and of the Commercial Museum, Philadelphia. But the Council believe it possible, in the library of every trade center, to form special sections which will provide business men and others with much information valuable to them in business. All libraries contain books useful to business men, some have large numbers of such books. The practice has been to store them with the general collection. As business men, however, are, as a rule, imperfectly trained in the use of general reference libraries, the Council recommend that, wherever possible, these collections be brought together to form special libraries, as in the case of the libraries now open in Glasgow and Liverpool. Such a library should include:—

Commercial and Industrial data (reports of the Boards of Trade and Agriculture and Fisheries, Consular and Colonial reports, parliamentary publications relating to commerce, trade periodicals and catalogues, reports of Chambers of Commerce, statistical publications).
Geographical information (atlases, maps, gazetteers, directories, books of travel written from the standpoint of commercial development).
Transport and communication (shipping, railway, and postal guides, telephone directories, telegraphic codes).
Financial information (tariffs, foreign exchanges, banking, company reports).
Commercial and Industrial Law.
Business organization (office methods, advertising, salesmanship, works management, accountancy, cost keeping, etc.).
Working collection of general and special reference books.
Journals on Commerce, Industry and Finance.

Useful lists of books for a commercial library are to be found in "Directories and Codes in Guildhall Library," kindly contributed to the "Library Association Record," by Mr. Bernard Kettle, and in "The Purpose, Equipment and Methods of the Commercial Library," by Mr. S. A. Pitt.

11. In certain libraries where it may not be practicable to establish separate commercial libraries, printed catalogues, revised at frequent intervals, business books would serve a very useful purpose. Examples of such catalogues have been published by the Bolton and Rochdale Public Libraries.

RELATIONS WITH GOVERNMENT DEPARTMENTS.

12. The Government collect and print information on commercial subjects which ought to reach most of the people for whom it is intended if the expenditure on it is to be justified. One obvious way of doing this would be for the Board of Trade Commercial Intelligence Branch to send to provincial commercial libraries all British official publications on commerce, as soon as published, without application and free of cost.

13. The same Department has formed a collection of foreign trade catalogues, and has published a list and index of them. These catalogues are lent to manufacturers in the provinces on application; and the same facilities might well be granted to public libraries on the disclosure of the applicant's name. A better plan would be for the Department, when collecting for its own use, to obtain additional copies for the large and

separately organized commercial libraries and to forward them without cost.

14. Bearing in mind this difficulty in acquiring much of the most valuable material, the Council are of opinion that what has been said about co-operation in the full use of technical books applies equally to the dissemination of commercial information. In this country there are four important sources of information:—

(*a*) Consular Service.
(*b*) The Board of Trade Commercial Intelligence Branch.
(*c*) The Scientific and Technical Staff of the Imperial Institute.
(*d*) The Agencies-General for the Colonies.

The principal work of the Imperial Institute Staff is to promote by scientific and technical investigation the commercial utilization of the Empire's raw materials, and to supply full information concerning Colonial and Indian resources. These investigations are published quarterly in the Bulletin of the Imperial Institute. The Board of Trade Commercial Intelligence Branch, on the other hand, is not concerned directly with scientific and technical investigation but rather with finding markets for British goods These departments collect abundance of information, and the Council are glad to note that in a recent Memorandum on the Future Organization of Commercial Intelligence (Cd. 8715), Appendix, pp. 31-3, the defects in methods of publishing this information have been considered and that proposals for their reform are in course of being carried out.

FILING AND FORM OF MATERIAL.

15. The form of the material collected for these special libraries has had an undue bearing on the question whether it should be preserved or not. To file a mass of trade catalogues, of all shapes and sizes, pamphlets, leaflets, clippings, and maps so that a particular item, perhaps difficult to describe bibliographically, may be found quickly, and so that the order of the classification is not too broken, is a difficult problem, especially if economy in equipment and indexing is imperative. The Council feel that it is desirable for librarians to consider carefully methods of filing material of this kind, and at a later date they hope to make recommendations which may lead to standardizing methods.

FORM OF TRADE CATALOGUES.

16. The Council have submitted proposals to the leading Professional Societies and Trade Journals for the organization of trade catalogue literature on standardized lines, and possibly for the publication of periodical condensed catalogues of British manufacturing firms. For this purpose the whole field of trade catalogue literature should be surveyed and classified, and a Committee representative of each class appointed to advise on the publication of their sections. Periodical condensed catalogues have for some time been published in this country for the building trades, and similar publications are being issued in the States by the American Society of Mechanical Engineers and the American Chemical Societies. As, however, the type of catalogue best suited to a particular class of industries can only be settled by a body of experts in those industries, the Council confine themselves to pointing out the chaotic system of trade catalogue publication in this country, and offers its co-operation in any efforts made with a view to initiating reform.

TRAINING OF SPECIAL LIBRARIANS.

17. The custodian of any special library, besides the ordinary qualifications of a librarian, should have special qualifications, particularly as a bibliographer. How essential special training is can be understood from the external work of the Philadelphia Commercial Library, where numerous inquiries are answered by telephone and correspondence as to the demands for American goods in foreign countries and the names of possible purchasers; the tariff that must be paid on the articles sold to foreign countries, and the custom-house regulations that must be observed; the sources of supply for the raw materials used by American manufacturers, and the names of the firms from whom these products may be obtained.

The Council strongly recommend library assistants to supplement their general training in librarianship with special training in a well-defined section of bibliography: a competent assistant, for example, who acquires a thorough knowledge of the bibliography and classification of Engineering (which implies ability to select, classify, catalogue, and annotate engineering books, and to know where to look among them for specific information) adds immeasurably to the value of his services In this connection the Council have considered a valuable report submitted by Mr. H. V. Hopwood on the Training of Librarians of Technical Libraries, and they cordially endorse the conclusion arrived at by Mr. Hopwood that the possession of scientific and technical qualifications will not in themselves suffice unless their holder has previously received the foundation of a sound library training. In other words, a special librarian is one with a special knowledge of the literature of his subject and of the way to organize it for use, and not necessarily one with a special knowledge of the subject itself. The Council see very little prospect of the successful operation of special collections unless Library Committees are prepared to pay a much higher rate of remuneration to library assistants competing for these positions than obtains at present.

The Council are of opinion that by organizing a body of special librarians within the

Library Association and by including a section in the RECORD on Special Libraries (to serve the purpose of the American journal of that name), the membership of the Association might be increased and the interest of members generally awakened to the advantages of specialization.

LIBRARY CO-ORDINATION IN ENGLAND.

The following extract has been copied from the Journal of the Society of Chemical Industry's report of the Faradya Society Meeting held May 7, 1918. That a matter of this nature should come from the well known and highly esteemed Faraday Society is of import and American Societies might do well to take heed and the special libraries of the country should prepare themselves to meet the inevitable co-ordination that must needs come in time.

THE FARADAY SOCIETY MEETING, MAY 7, 1918.

I. Co-ordination in the reading of papers.

II. Co ordination in the publication of papers.

III. Centralization of abstracting and indexing.

(a) One central body only, such as the Conjoint Board, to undertake the publication of abstracts and to sell them at cost in sections to members of affiliated societies.

(b) Abstracting to be internationalized, each country being responsible for abstracting its own work and for translating abstracts supplied by foreign centers.

(c) Societies to group themselves together for the purpose of abstracting.

IV. Co-operation between the societies and their libraries.

(a) The societies to be federated into groups, physical, chemical, engineering with its sub-groups, each group being housed in a common building, with a complete library devoted to the particular branch of science represented by the group. The libraries could be connected with another by telephone.

(b) The principal societies to have provincial branches, which should federate and be housed in one building in every important town.

(c) Closer co-operation or federation between existing London and provincial societies.

(d) The erection of one great central building and library in London for all the principal societies and their books, on the pattern of the Central Engineering building endowed by Mr. Carnegie in New York. Among the functions of such a library would be

(1) To issue a complete card-index of all published works, which could be repeated for the chief provincial centres and be available in sections for any one who desired particular references.

(2) To have a trained staff ready to supply information or references on any branch of work. As a preliminary step it would be necessary to create a College of Librarians, or School of Library Science.

READING AND BUSINESS

"Ours has been and is yet to some extent a new country. Its opportunities have been so many that ability in the rough was sufficient to make good. The need of keener perceptions, the wider initiative that good books yield had not yet been felt. Men who had hardly glimpsed between the covers of a book in their whole lives became captains of industry.

But the day of untutored success in business is passing. The unlettered man is having less and less chance for the best places The rough diamond who molded raw new country conditions with inborn shrewdness is giving way to the smooth, well-read man whose superiority of mind enables him to mold to his purpose the men around him."

"There is of course much that has not yet been done, much that has not even been attempted, but after all perhaps our greatest problem is to make the most of what we already have; certainly we do not do this today. Take the matter of knowledge. We rightly lay stress on the importance of research and the advancement of knowledge. We cannot keep this before us too prominently, because the spirit of research is the very basis of progress. We must not overlook the fact, however, that too often we treat shamefully that knowledge that has already been garnered Thousands of useful results are obtained every year that would be helpful to industry were an effective effort made to make them widely known. Even the knowledge that is in the text-books and that is accessible to everybody is not really used. If we could apply one-tenth of such knowledge, fortunes would be made in every year. We must remember that in time of peace Germany became rich by having faith in the *obvious*. In the field of chemistry Germany has not shown any genius for scientific advancement, but she has taken her knowledge seriously and dispalyed a real and saving faith in the formulae of the text-books."

President RICHARD C. MACLAURIN,
Mass. Institute of Technology.

Special Libraries

Published Monthly except July and August
Editorial Office
160 Front St., New York City.
Entered at the Post Office at New York, N. Y., as second class matter under the Act of March 3, 1879.

Subscriptions (10 issues)..... .$4.00 a year
Single copies $0.50

Editor-in-Chief ... ...J. H. FRIEDEL
Managing Editor.....K. C. WALKER

ASSOCIATE EDITORS

Agricultural and Government Libraries
Claribel R. Barnett
Business and Commercial Libraries..Mary B. Day
Financial Libraries .... Ella M. Genung
Technological and Engineering Libraries
Edward D. Greenman
Theological and Fine Arts Libraries
Mary A. Pillsbury
Law Libraries .....Edward H. Redstone

All membership and subscription dues should be made out to the Association and mailed to Miss Estelle Liebmann, Ronald Press, 20 Vesey Street, New York.

EDITORIAL

Few special librarians have seen the Interim Report of the Council on the Provision of Technical and Commercial Libraries put out by The Library Association of London, England. It has been thought worth while to print this report in full in this issue of Special Libraries to show the extent of the interest in special library work in England. Of particular interest is the last section devoted to the "Training of Special Librarians." In connection with this subject we are taking the liberty of reprinting in full from the Library Association Record a paper by Mr. Henry V. Hopwood on "The Educational Standard of Librarianship in Relation to Technology." The subject of certification being uppermost in our minds, these two papers reflecting the British point of view should be of interest.

Signs of the Times.

Paper by M. Paul Otlet, Director of the International Institute of Bibliography given at the Interally Chem. Conference held in Paris, in April of this year (1919), upon International bibliographical work and indexes and the part chemical companies and societies can play in this work.

He explains the development, purpose and work of the Int. Inst. of Bibliography, etc., etc.

Concludes by submitting the following suggestions:

1. That the chemical interests have a central, international organization, association or union which would control as in one department all general functions pertaining to this science and establish the necessary relations between various members of the department and of this branch of science with other branches.
2. The documentation of literature would be one of the functions of this organization. An international office for this purpose should be created which should be related to the national offices, which in turn should be in touch with such local centers as laboratories, universities and factories.
3. That the documentation of chemistry should be composed of—
   (a) Biblio. of titles by author and subject.
   (b) A selection of abstracts translated into the various languages.
   (c) That this material be brought up to date and be continued by a periodical including lists of books, periodicals and patents and the annual cumulation go into the construction of an International Library of Chemistry.
   (d) That there be an International Library of Chemistry centralizing the chem. pub. in all countries.
4. That this bibliography be made with cumulative indexes (5 or 10 yrs.).
5. That this International office for the documentation of chemistry be attached to the International Institute of Bibliography.

The following extract was taken from F. E. Webner's book on "Factory Costs" and will be found on pages 230-231.

"Technical Library.

This may include both bound volumes and current periodicals. In some cases the cost of the library may be treated as an asset, but the better plan is to absorb its cost in overhead expense as time proceeds. Where the library is maintained for any or all of the employees indiscriminately—as is very generally the practice in modern institutions—the cost may be spread over departments on the basis of the number of employees in each, as compared with the total number of employees in the plant.

The propriety of debiting production costs with the expense attached to a technical library in hardly open to question *The importance of such a library cannot be emphasized too strongly*, not only for its direct technical value, but also for its general effect on production; i.e. the new ideas more or less directly developed from its use which insure to the benefit of processes and production.

Technical libraries are becoming more and more a feature of the modern plant, *and the investment in such a library is apt to produce greater returns, direct and indirect, than almost any other investment of equal amount in the plant.*"

Non-members take notice! Membership and subscription to ten numbers, $4.00; to non-members ten numbers and NO membership, $4.50. Which do you prefer to be? Help us increase our membership.

United Engineering Societies Library Annual Report 1919

The 1919 report of this Library is an interesting publication from several points of view. As this is the largest engineering library in the world it measures to a large extent the interest in this class of literature, and indirectly the importance of specialized knowledge.

The total resources of this Library were, at the end of 1919, as follows: Volumes, 115,934; pamphlets, 32,818; maps and plans, 148; searches, 3,221; total, 152,091

The receipts during the year amounted to 6,993, including gifts and purchases of books, pamphlets, maps and plans, and searches.

A key to the usefulness of this institution is to be found in the attendance register. During 1919 there were 22,042 visitors, an increase of 6,979 or 46% over 1918. More significant is the fact that while the above figures represent service rendered to visitors this Library answered over 2,000 telephone inquiries.

Many special librarians are familiar with the Service Bureau of the Engineering Library and will be interested in the following extract. "During the year 552 searches, chiefly bibliographic, were prepared in answer to specific inquiries. . . . The number of translations made was 71, containing 227,300 words."

Perhaps libraries outside New York and to a large extent in New York have benefited most by the photostat service rendered by the Engineering Library. Some idea of the extent of this branch of the Library's service may be gained when we learn that the orders "amounted to 2,319 and required 23,951 prints. . . . This increase of 101% in orders shows the wide appreciation by our members of this form of assistance."

On July 1st Miss Margaret Mann, formerly of the Carnegie Library of Pittsburgh, came to the Engineering Library to recatalog this collection. Extensive plans have been made to recatalog this ever increasingly valuable collection. Special librarians about the country will find the description of the bibliography of the Institut International de Bibliographie appearing in this report in connection with the reclassifying and recataloging of this collection of interest. This "Brussels" classification should be better known about this country, and for that reason we are reprinting in full Dr. Craver's summary. Special librarians will also find an alphabetic guide to this classification in English as developed by the Technology Department of the Carnegie Library of Pittsburgh of value.

CLASSIFICATION

Two distinct, but related problems in classification confront the librarian; the classification of the actual books in order to bring the volumes on each subject together on the shelves, and the classification of the cards representing the works in the library, so that its resources on any subject can be ascertained from the catalog.

It is obviously desirable that the same classification should be adopted for both these purposes; but it is not essential, and as a matter of fact, some variations between the arrangement of the two classifications are found in most libraries, occasioned by local conditions that seem to warrant a deviation from the logical plan.

We propose to adopt the same classification for all our work, but in doing so it is the intention to keep clearly in mind the basic difference between the classification of the two kinds of material, due to their fundamental physical differences.

Books frequently treat of several subjects or the relations of two subjects to each other. One copy of a book can be shelved in but one place, with the result that only in the broadest sense can it be said that the books in any section of shelves contain the library's resources on a subject. If the books on the metallurgy of iron, copper, etc., are segregated under these specific headings, the alcove for electric furnaces cannot contain all the material on that subject. In the catalog this dispersal of material can be overcome by placing cards under both subjects, or under as many as may be thought desirable.

For many years librarians have been divided into advocates of "broad" classification and "close" classification. Those of the former party base their arguments on the expense of close classification, the impossibility of closely grouping the books on a subject and the cumbersome notation involved in the close classification of a large collection of books, causing frequent mistakes in replacing books on the shelves.

Those who favor close classification point to the saving of the readers' time resulting from it, especially in growing and large libraries.

The point of view adopted seems dependent upon whether classification on the shelves or in the catalog is actually in mind. Close classification in the catalog is undoubtedly desirable; on the shelves it is practically impossible.

In our work we intend to adopt a plan by which the classes on the shelves will be small enough to be conveniently surveyed by a reader, but not so small that extremely long location numbers will be necessary or that every book on a subdivision of a topic is actually touched by another book on the same subdivision; while at the same time the classification in the catalog will be carried to a point where it will be possible to locate a specific subject without examining much related matter.

The scheme of classification that seems best adapted for our needs as indicated above is the Dewey classification as extended and modified by the Institut International de Bibliographie, usually known as the "Brussels" classification, to differentiate it from its progenitor

This classification follows Dewey's plan in the adoption of a decimal notation and in the arrangement of its main classes. Human knowledge is divided into nine classes and each is given a decimal number as .1, .2, .3, etc. The numbers beginning with .0 are reserved for encyclopedias, newspapers and other material too general in inclusion to be assigned to a specific class.

Each class is divided and subdivided as may be necessary, the location of the classes being indicated by the addition of numbers at the right of the class numbers, as is illustrated by the following example:

.6	Applied
.62	Engineering
622	Mining
.6223	Exploitation of mines
.62233	Of coal mines

This process can be repeated indefinitely.

The Brussels classification differs from the Dewey classification in two important particulars, one of which is a matter of minuteness, the other of form. As regards the first difference, it is probably sufficient to state that the published tables cover 2,239 pages, in comparison with the 808 pages of the latest edition of Dewey This extension of the tables permits a much closer direct classification of material.

The other change is much more important. One of the chief defects of the original Dewey classification is that, owing to the fact that it was planned primarily for the arrangement of books, it lacks certain apparatus needed in classed catalogs. It is not sufficiently minute for the latter purpose and it lacks a method for subdividing existing headings in order to express details, various points of view and the relations between different subjects. For example, it is sometimes convenient to separate the material on some subject into classes by date, language or thoroughness of treatment; or to separate the statistical works on a subject from the technical ones.

The Brussels classification provides for such needs by the addition of certain symbols to express relations and of detailed general tables of usual relations, which can be added to any subject by means of these marks. The symbols adopted are few, their position in the arrangement of items is clearly specified and their use carefully explained. They are outlined below in the adopted sequence.

Accretion Sign: The sign of addition, +, is used to indicate that a book treats of all the subject numbers connected by it; *e. g.*, 621.32+621.33, a book on electric lighting and electric traction.

Coupling Sign: The hyphen, -, is used in certain special cases to enable one subdivision within a class to be combined with another in the same class without confusion. The class number for agricultural land drainage is 63.11 and for forestry 63.49; the number 63.49-11 can be composed to indicate works on the drainage of forests.

Relation Sign: The most important of the symbols adopted is the relation sign; the colon, :. When used in the classsification to join two numbers it indicates that the subjects represented by them are considered in relation to each other. It enables us to extend the classification to great lengths in order to express relations, without having to provide the apparatus in advance. Taking, for example, the number for rolling mills, 621.77, and the number 310, statistics, we can form the combination 621.77:31 representing the statistics of rolling mills.

Form Sign: Divisions of the literature of a subject by form are made by using a parenthetic number beginning with zero (0—). This is further divided into form divisions which can be used at any place and divisions restricted to special subjects.

These forms enable the classifier to express such differences in the form of material as are represented by treatises, dictionaries, periodicals, histories, etc. A periodical on metallurgy has the number 669(05), a history of that subject is 669 (09).

Examples of the special form division are 621.313(008). Patents on dynamos; 621,325 (003), specifications for electric arc lighting; and 622(007) mining law.

Place Sign: Place is indicated by numbers which are written in parentheses and refer to a special geographical table. The table also provides for the differentiation of geologic periods. Examples are: 625(41) railways of Scotland; 621.19(73) steam power plants in the United States.

Language Sign: Language divisions are indicated by the equality sign, =, followed

by a number. We are enabled to divide a subject by language if we wish, as 62(05) = 44, French engineering periodicals.

Time Sign: It is sometimes convenient to specify time in our classification. This is done by adding the date in quotation marks, as 623(09)"17," the history of military engineering in the eighteenth century.

General Points of View: The sign for these is a double zero, 00. The supplementary tables are:

001 Speculative: idea, plan, purpose, etc.
002 Realization: execution, construction, etc.
003 Economic: industrial production, cost, etc.
004 Service and use: workings, administration.
005 Equipment and apparatus.
006 Buildings and establishments; organization and service
007 Special personnel.

Subdivisions are provided for these numbers.

These supplementary tables are especially useful for the classification of scientific material, such as that in the Engineering Societies Library. They enable us to indicate the point of view of any article when the main division to which it belongs lacks the necessary intension. They provide, for example, for such an analysis of material as 62163.0012 Theory of centrifugal ventilators;

62163.0031 Manufacturing costs of centrifugal ventilators;

62113.0042 Operation of centrifugal ventilators.

As examples of the classification the following arrangements of material by form and by point of view may be interesting:

BY FORM

621.13 Locomotive
621.13(02) Treatises on the locomotive
621.13(44) Locomotives in France
621.13(5) Locomotives in Asia
621.13(19) Locomotives in the twentieth century
621.13:622 Locomotives in mining
621.13 B Baldwin locomotives
621.13.0014 Locomotive tests
621.13 04 Locomotive design
621.13.3 Locomotive boilers
621 13.42 Locomotive valve gears

BY POINT OF VIEW

621.12 Marine engine
621.120012 Marine engine theory and calculation
621.120014 Marine engine tests and trials trials
621.120022 Marine engine methods of manufacture
621.120023 Marine engine materials
621.120025 Marine engine special machinery for making
621.1200272 Marine engine mounting and assembling
621.120031 Marine engine cost of manufacture
621.120035 Marine engine prices
621.120042 Marine engine management
621.120045 Marine engine inspection
621.120046 Marine engine deterioration and accidents
621.12005 Marine engine fittings
621.12006 Marine engine factories
621.120072 Marine engine marine engineers

These examples illustrate the minuteness with which material can be classified if necessary, and the various forms of classification that may be used to meet special needs or the peculiarities of certain kinds of material. It is not necessary, of course, to introduce such great refinement in all cases, nor, in fact, in many, but the possibility of such subdivision, whenever desired, is very valuable.

A frequent objection to the decimal notation is the lengthy numbers that it requires. This objection is sound if the classification of books on library shelves is intended, for it is difficult to mark long numbers clearly on books, or to arrange these rapidly. The objection loses its force when the numbers are only used for filing cards in catalog trays, for these are not removed after having been once filed and there is also no necessity for copying the numbers.

An incidental advantage of this classification, but one which is not to be despised, is its wide use. The Dewey classification is used more generally by libraries than any other classification, and the Brussels classification has found greater favor than any other for indexing and cataloging. The latter is now used by a number of Belgian and French magazines to classify the abstracts which they publish and was in use by several other organizations that suspended during the war. It has more international acceptance than any other system and its principles and notation are quite generally understood. The fact that many users of the catalog will have some previous familiarity with its system will enable them to use it more readily and with less assistance

This outline of the proposed plans is incomplete, many points having been omitted in the desire for brevity upon a subject of considerable magnitude. It is hoped, however, that it is sufficient to demonstrate to you that the system is sufficiently comprehensive and elastic to meet successfully any demand that this Library may have to place upon it.

The Library Service in the Report of the Congressional Joint Commission on the Reclassification of Salaries

by

Eunice R. Oberly, Librarian, Bureau of Plant Industry.

In March 1919, there was created by act of Congress a "Joint Congressional Commission on Reclassification of Salaries", charged with the duty of investigating the rates of compensation paid to civilian employees by the municipal government and the various executive departments...in the District of Columbia...and report...what reclassification and readjustment of compensation should be made for the same character of employment throughout the District of Columbia..." On March 12, 1920, the report of this Commission was submitted to Congress. *This report is in two parts: Part I, "The Report submitting the classification of positions and the schedules of compensation...." Part II, "The classification of positions and the schedules of compensation.. "

Part I is divided into seven chapters, setting forth the findings of the Commission as to lack of equity and uniformity in present rates of compensation and the recommendation for bringing about and maintaining equity and uniformity in these respects, findings and recommendations concerning conditions of employment, selection, training, efficiency, advancement, removal and retirement from the service, the draft of a bill for the adoption and administration of the classification and schedules of compensation, and a description of the methods of work employed by the Commission in accomplishing its results

Part II, which consists of the detailed classification of positions, with salary schedules attached to each class, is arranged under 44 services in three groups as follows: (1) "Services involving clerical, office or commercial work; (2) Services involving the skilled trades, manual labor, public safety of related work; (3) Services involving scientific, technical, professional or subsidiary work." For each class is given the title of the class, specifications of the class, (consisting of a statement of the duties of positions in the class), the qualifications for entrance to the class, principal lines of promotion, and the compensation recommended. This classification was made on the basis of questionnaires which were filled out in each case by the individual actually performing the work in the position in question. Each questionnaire contained 29 questions, a part answered by the employee, a part by the immediate superior, the latter stating the educational qualifications required of an entrant to the position. After tentative classifications had been set up for the various services by the Commission's classifiers, these questionnaires were "sorted to classes" to test the classification, and it was revised to meet this test when necessary In all about 1,700 classes were set up.

The work of studying and classifying the approximately 107,000 questionnaires submitted to the Commission represents the largest piece of "job analysis" ever undertaken The time devoted to the classification itself, about 6 or 8 months, was all too short to do a thorough and well tested piece of work, but considering the limitations of time, and other difficulties unavoidable in the conditions under which the work was done, the classification is an excellent piece of work, and the Commission's report and this classification mark an epoch in the history of the civil service, of more importance than any thing which has been done in this connection since the Civil Service Act of 1883, which created the Civil Service Commission and rang the death knell of the spoils system. This report should be of the greatest interest therefore, not only to all persons concerned in any way with employment in any line of work, but also to every intelligent American citizen, interested in an efficient civil service.

In view of the importance of the report and its probable influence, it is greatly to be regretted by librarians that the library profession did not fair better in this classification and in the valuation of the service, as evidenced in the Commission's salary recommendations. The library service is listed under "Services involving scientific, technical or subsidiary work," but it falls far below most of the services in this group for which comparable educational and professional training are required.

On page 10, of Part I, of the report the Commission states concerning the salary schedule "the more we have tested it the more we have been made to feel that it is 'uniform' and that it is 'equitable'—alike to the Government and to the employee." As a matter of fact, there was little time for testing the schedules, and none for compar-

ing service with service before the report went to Congress with the result that there are many amazing discrepancies in the recommendations. The salary schedules in the library service show them to be neither "uniform" nor "equitable" There are discrepancies in salary recommendations for the various classes within the service itself, and a comparison of the recommendations with those for other services shows a complete lack of a comprehension of the nature of library work and the qualifications required for it.

The first grade in the service, "Library Aid," which calls for high school education, preferably some library training or experience, and some knowledge of modern languages, is given a minimum salary of $1,080, maximum $1,200, while a mimeograph operator, of whom is required common school education and not less than three months' experience in operating a mimeograph machine, is recommended for a beginning salary of $1,140, and a maximum of $1,260.

The Under Clerk, who "under immediate supervision" is to perform the simplest routine work of a general or miscellaneous character" such as opening and stamping mail, distributing blank forms, operating numbering and dating machines and so forth, and who is required to have a common school education and clerical aptitude is to begin at $1,080, the same salary as the Library Aid, but may reach a maximum of $1,260, $60 more than the maximum for the Library Aid. The Junior Clerk, with common school education, and two years of business school or two years clerical experience, who "under immediate supervision," is to perform "general clerical work of a routine nature, requiring neither specialized skill nor exercise of independent judgment," begins at the same salary as the Junior Library Assistant, who is required to have high school education, and elementary library training, or two years library experience, and who, among other things, is supposed to do, under supervision, cataloging, classifying and shelf listing, which all librarians know requires, even in their elementary stages, both specialized skill and the exercise of independent judgment The Junior Library Assistant, in recognition perhaps (?) of her additional educational requirements, and higher grade work, may attain a maximum of $60 more than the Junior Clerk. It is to be noted, moreover, that these clerks are not required to operate a typewriter, as the typist clerk is in another class. The Under Typist, with two years high school or business college, begins at a salary of $1,200, where the Library Aid leaves off.

The High School Librarian with college and "library school training; broad knowledge of literature and of the curriculum of the secondary schools; preferably some experience in reference work; some experience in teaching desirable, and sympathetic understanding of young people," is given a salary ranging from $1,200 to $1,500, while the Junior Clerk noted above ranges from $1,320 to $1,140

The salary for the Senior Special Librarian, Departmental Library, provided for librarians of important bureau libraries such as the Geological Survey and the Patent Office, is given the same salary as that of a large department library such as the Department of Agriculture and both of these are below even the smallest divisions of the Library of Congress, though several of them represent highly specialized libraries, the largest comprehensive collections of their kind in the world, rendering a library service far beyond the limits of their departments, and their librarians have the administrative responsibilities of bureau heads within their departments and are so considered in their organizations. The maximum salary recommended for this class is $2,880, $60 more than that of the Chief File and Record Clerk, whose maximum is $2,820. Could any one really think that the administrative responsibilities of a chief mail and file clerk could be more arduous than those of a chief librarian, who must be responsible for assembling and making available large collections of scientific or technical library material, covering a variety of subjects and published in many languages? And compare the qualifications required for the two positions:

Chief File and Record Clerk Qualifications:	Senior Special Librarian:
Equivalent of high school graduation; 3 years filing experience, proven administrative ability.	Equivalent of graduation from recognized college and library school; not less than five years experience in library work, at least 3 of which shall have been in reference or research work; good working knowledge of 2 modern languages; and administrative ability.

The Commission probably does not realize that the most complicated file in the world is the card index of a library, and that correspondence filing systems and, in fact, all modern card record systems were borrowed from libraries, and that an understanding of the principles underlying such work is merely a part of the training of a librarian.

In the light of these comparisons, and others which we might make (such as

comparing the salaries of the chiefs of the divisions in the Library of Congress, for instance, with similar positions in other professional services), we can not refrain from speculating as to what is the curse which attaches to the designation "librarian"? If knowledge is power, why should those who have chosen as their life work the task of collecting and guarding books, the storehouses of knowledge, and of unlocking these storehouses by making the contents available through all the technique of modern library methods, be penalized by the constant and humiliating underestimation of their work and their powers?

If the library service in this classification stood alone it would be the duty of every librarian to do all in his power to prevent the adoption to the classification. But the library service is after all a very small part of the government civil service, and a study of the general recommendations of the report, in relation to employment methods, and the general fundamental principals of the classification itself, have led the librarians of Washington, to agree that in spite of their own professional disappointment they will support the report for the good that it would undoubtedly bring about for the government service in general. This bill would make of the Civil Service Commission, not merely a routine examining and appointing agency, but a employment agency, with scientific employment policy, a thing which the government service has up to the present woefully lacked. The bill empowers that Civil Service Commission to recommend to Congress changes and adjustments in the classification and compensation as recommended in the "Classification of 1920," and to continue to study and adjust these matters to meet changing conditions. The librarians may hope then that through this power of adjustment of the Civil Service Commission some of the glaring inconsistencies in the salaries for the library service may be modified and that in time the profession of librarianship may be eventually assigned its rightful place, not only in the matter of salary compensation but in the estimation of people in general.

*Report of the Congressional Joint Commission on the reclassification of Salaries. Washington, Govt Print Off., 1920. 66th Congr 2d sess. House of Representatives, Doc. No. 686.

Librarians desiring copies of the report should apply to their Congressman or to the Superintendent of Documents.

Notes on Industrial Library Planning

The special library in the business house today has "just growed up." In many instances the library had its inception in some individual's office or in some corner of the file or statistical room. Then too, the idea had grown so fast that little real thought has been put upon the room and its equipment in the light of growth and working space. The special library has come to stay and the future must see a more determined study of the room and its equipment.

Presumably the reason that we have practically no literature on the subject is due to the fact that many of the special collections were not administered by library trained people. Perhaps after all the most blame can be put upon the business man himself for too often we feel his "Oh, any space is good enough for the library" attitude was uppermost. The library does not represent a producing department or earning power measured in dollars and cents. Yet St Elmo Lewis says, "The library method is the attempt to accumulate facts bearing upon 70 per cent. of the activities of a business which are far more important in the aggregate for the guidance of business, than the Bookkeeping Department, which has to do with only 30 per cent. of the business activities, but which because of the attitude of the rule of-thumb and system man, has been considered so important, that bookkeeping has had a very generous appropriation for its improvement, while all the rest of the business facts relative to the activities of the business have been left to the vague and uncertain judgments and memories of the employees. The library with its data-built addition, is an attempt to get a real line on the values of the activities of a business, and while it can only accumulate facts, yet it is an attempt to get a line of facts, which neither bookkeeping nor any other mere accounting can obtain with the same degree of efficiency." Yet how many of us have seen the same care and expense devoted to the space for adequately housing the library that the accounting department receives? A business house may think nothing, and in fact, boast of its $7,000, three color ad in a leading weekly periodical, but which may or may not bring in a given amount of money for the one issue that it appears in, is considered a legitimate expense. But if the librarian

Fig. 1

asks for $400 for equipment that is to house records bearing upon "70 per cent. of" the organization's work, he is considered unbusiness like and extravagant.

Happily this attitude is dying out as is witnessed by the library of the Insurance Association of Boston, the Arthur D. Little library, the Kodak Park library and the New Jersey Zinc Company libraries.

Not many business librarians are given the opportunity to plan for new libraries or reconstruct existing rooms. It is more often that the librarian is forced to redesign quarters in which the library already exists.

In any planning work for a library many of the points considered in public library planning may be used in special library planning. Unfortunately records of existing libraries in business houses have not been accumulated and digested for library planning the way they have been in public library planning. If more floor plans and pictures of existing special libraries were available and statistics of accessions, discards, etc., were available for a period of years we would be, presumably, better able to plan new rooms more intelligently.

Of course, it is not best to say that, based upon past records, an organization of a given nature, and a given staff, located in a given town, will probably have a given number of volumes as a suitable working collection, will require a staff of a given number, with a working space of a given number of square feet. Yet to be able to approximate your needs from a study of similar organizations would undoubtedly place special library planning out of the realm of guess work. Guess work should not enter into a business or special library field, for if we are a business library we are not businesslike if we guess.

Unlike our public library brothers our location is usually decided by those "higher up" before we arrive on the scene. As was remarked in the beginning, the business library most frequently had its origin in some individual's office. Our location, then is chosen for us. If some department head deems it advisable to have a library for his department's work again our location is decided for us. Seldom it is that the librarian has a choice in the matter. Yet who bears the fruits of an illogically situated library but the librarian? Yet are we in a position as a body, to speak authoritatively on the subject? Do we, as a body, know what the experience of the several hundred special libraries is? Is it a safe thing to say that if an Engineering department feels the need of a library that the library should be housed

in the Engineering department? Because the Engineering department finds a need for a library does not say that that department will use the library the most. Use is, and always should be, the sole reason for the library's existence. The writer knows of an instance where a library was organized under one department and yet monthly statistics showed that another department used the library some 38 to 40 odd per cent. of the whole, whereas the department for which the library existed used the library only to about 12 to 18 per cent. of the whole. And so it goes! We are as yet far from scientific or business like.

Naturally, in any library, the first consideration is shelving. Here we can follow general library rulings to a large extent although in plotting for the shelving in a special collection allowance must be made for pamphlets, i. e., if a librarian decides to place all his pamphlets on the shelves then the number of volumes to a running foot will be altered. Ordinarily in a special collection it is best to allow ten books to the running foot where pamphlets are not housed on the shelves. If pamphlets are bound in individual binders and placed on the shelves 15 volumes to the running foot ought to permit a good factor of safety. A

Fig. 2

book collection then, of 5,000 volumes, including pamphlets, will require 333⅓ feet, or 16 three-foot seven shelf book cases, or 2 double face 9-foot cases with one 12-foot single face case. Where a library has a large proportion of bound periodicals it should count about eight volumes to the running foot.

Eastman, in his little pamphlet on the "Library Building" gives the following information for plotting the necessary shelf requirements.

(1) The present number of volumes
(2) The yearly addition.
(3) The yearly loss or removal.
(4) The proportion of books a size larger than the average.
(5) The proportion of empty spaces needed for immediate placing of new books in their order
(6) The proportion of empty spaces needed for convenient class arrangement, finding and handling of books.
(7) The proportion of shelves needed for special uses, as new arrivals, books in process of preparation and for special collections

While the above rules apply to general libraries they serve as a very good guide to the special library As a special library

Fig. 3

is seldom under the necessity of preserving material that is out of date the collection is far more likely to stay nearer a given figure than would be the case in a general library. In fact it is well to keep, as far as possible, an accurate account of your collection based upon the above rulings as you will then be in a position to determine within a reasonable margin, the cost of "boarding" your books.

Having plotted the required shelving for the immediate collection and a twenty years' growth, you are in a position to decide upon the kind of cases you will have. The kind of case will depend upon specifications in force in your organization. If steel equip-

Fig. 4

ment is required, your cases will have to be of steel. The Library Bureau, Art Metal Construction Company, Snead Company are among the leading manufacturers of library shelving. The finish of the cases will depend upon the specifications in force. Three feet should be allowed between cases if arranged in parallel arrangements. Parallel arrangement will be found, in most cases, most economical. It is seldom that office wall space, or any other space, unless specially built, will accommodate the standard three-foot unit book case arranged along the walls. Specially constructed shelving is to be frowned upon. When purchasing wooden cases it is best to purchase the Library Bureau unit case. The standard shelf usually measures 8 inches wide. Wider shelves may be purchased if the collection warrants. Standard library cases are arranged with shelving adjustable every inch. The usual practice is to place the shelves for the average size books 10 inches apart. Larger books are usually placed on shelves from 12 to 20 inches apart Many librarians arrange the two lower shelves for oversize books and the remainder for the average size books.

After having handled your shelving to your satisfaction perhaps the next most important piece of library equipment is the card catalog. In determining upon the proper size for this part of your equipment you can, if figures are available, plot your cabinet's capacity in somewhat the same manner you did for the shelving. It will be necessary for you to estimate the approximate number of cards to a book and with this factor figure out your total number of trays, counting 800 medium weight cards to a tray, including guide cards. If purchasing from a standard library supply, or office furnishing house you find that the number of trays needed does not come even with the styles for sale always purchase the next larger size. In purchasing card cabinets be sure that your trays will interchange with ease and that the rods to lock your cards in are for library punched cards. Many of the cabinets purchased from office supply houses have rods that are for commercial cards and will not fit into library punched cards

The desks in a business library usually conform to the standards in force in the organization. It is well, however, if a li-

brarian handles a lot of periodicals that will be left in his care over night, to have a desk that has a vertical file drawer in the right hand pedestal. This file drawer forms a very convenient and safe receptacle for all periodicals. The librarian will also want a style desk that has facilities for filing the standard 3 x 5 cards in one drawer or two as the case may be. As many librarians are called upon to do more or less typing and yet at the same time requiring a large working surface on their desk the type of desk that provides for a standard typewriter to be placed in the left pedestal of the desk, is an essential departure from office standards. Somewhat the same end may be obtained by using a stand on rollers similar to the stands for adding machines, particularly where one typewriter has to do service for more than one person.

If a library, and most special libraries do, maintains an extensive clipping file, most librarians find that the "Cap" size vertical file is very economical. Particularly is this true if the library files its pamphlets in vertical files as the average pamphlet is cut wide enough to permit of two pamphlets being filed side by side in a vertical position While the vertical position is, perhaps, a minor consideration, all will grant that it is much easier to pick out a pamphlet filed vertically than one filed lengthwise, necessitating, thereby, additional labor in selecting the particular pamphlet from the file. Drawers for vertical files should, like the card cabinet, be interchangeable. Steel equipment is best, for besides its fire retarding qualities, it is not affected by weather conditions like the wooden cases.

Few special libraries are fortunate enough to have a real reading room. This is unfortunate, for an attractive reading room is a great stimulator to make people use the library. If the librarian is called upon to furnish a reading room, care should be taken to see that the reading tables are oblong, and unless for some special reason should be 3 ft. x 5 ft. and 31 inches high. Drawers are not essential. Chairs for use at the tables should be straight back, armless, saddle bottom chairs of light wood. If lounging or reading chairs are to be provided, the Windsor model is a very comfortable and light chair. Heavy furniture should not be tolerated. It is cumbersome, noisy and unsightly. All chairs should have rubber or metal caps on the bottoms of the legs.

Lighting is among the many other things that a special librarian has prepared for him. It is seldom that ceiling lights are suitably arranged for giving sufficient light to either wall cases or floor cases. Floor cases arranged in parallel should have, if ceiling light does not provide adequate light, 60-watt lamps placed at suitable distances between cases depending upon length of the aisle, provided with metal parabolic shades and separate chain pull switches

The illustrations in this article (figs. 1 and 2) show two views in a temporary location for a library that was to move into new quarters within a year's time. Fig. 3 —one corner of new quarters The problem of providing shelving and other equipment for these two quarters was complicated by the fact that equipment was to be purchased at the outset to supply considerable growth and yet have the equipment fit economically into both rooms After much work on blueprints made from drawings made to scale and cardboard furniture the desired ends were practically met Additional interest was added to the problem in view of the fact that in the room shown in fig. 1 and 2 it was impossible to arrange shelving in alcoves as the floor load would not permit the additional weight with safety. Whereas in the new quarters' alcove arrangement was to be the order of the day It was necessary, therefore, to avoid purchasing extra panelled ends that would have had to be discarded when shelving was moved into the new location. Note the special shelving for current periodicals. This style has worked out very well in the time that it has been used.

Figure 4 shows arrangement of cases in a large office building

Whenever a librarian is called upon to plan the equipment, he should always work from a scaled drawing and use cardboard furniture drawn to scale

LIBRARY WORK, 1919

Note:—This list includes articles in American library periodicals and the English library periodicals likely to be of interest to the special librarian.

Library Journal, Sept., 1919.

Friedel, J. H. Training for librarianship.

Walter, F. K. Training for the librarian of a business library or a business branch.

Keogh, A. Advanced library training for research workers.

Library Association Record, July, 1919.

Technical library development in Germany.

Library Association Record, August, 1919.

Technical and commercial library movement in South Africa.

Clifford, F. W The library of the chemical society, a record of a recent attempt at co-operation.

The Librarian, July, 1919.

Commercial and business libraries.

The Library World, July, 1919.

Otlet, Paul. Pour une classification universelle.

The Library World, Sept., 1919.

Clarke, E. P. The qualifications of the Works' librarian

Libraries in New York City

American Bankers Association, 5 Nassau Street.
American Exporters Translation Bureau, 17 Battery Place.
American Geographical Society, 15 West 81st Street.
American Hard Rubber Company, 11 Mercer Street.
American Institute of Electrical Engineers, See Library of the Engineering Societies.
American Institute of Mining Engineers, See Library of the Engineering Societies.
American International Corporation, 120 Broadway.
American Museum of Natural History, 77th Street and Central Park West.
American Numismatic and Archaeological Society, West 156th Street, near Broadway.
American Society of Civil Engineers, 29 West 39th Street.
American Society of Mechanical Engineers, See Library of the Engineering Societies.
American Telephone and Telegraph Company, 195 Broadway.
Association of the Bar of the City of New York, 42 West 44th Street
Association of Life Insurance, 165 Broadway.
Association of Railway Executives, 61 Broadway.
Bankers Trust Company, 16 Wall Street.
Barrett Manufacturing Company, 17 Battery Place.
Bonbright & Company, W. P., 120 Broadway.
Brooklyn Institute of Arts and Sciences, Eastern Parkway, Brooklyn.
Bureau of Vocational Information, 2 West 43rd Street.
Chase National Bank, 57 Broadway.
Chemical National Bank of New York, 270 Broadway.
Chemists' Club, 52 East 41st Street.
Cheney Brothers, 4th Avenue and 18th Street.
City Library, 10 City Hall.
College of Pharmacy of the City of New York, 115 West 68th Street.
College of Physicians and Surgeons, 437 West 59th Street.
College of the City of New York, St. Nicholas Terrace, corner West 139th Street.
Columbia University, 116th Street and Broadway.
Community Motion Picture Bureau, 46 West 24th Street.
Cornell University Medical College, 477 First Avenue.
Erie R. R., 30 Church Street.
Farmer's Loan and Trust Company, 16 William Street
Federal Reserve Bank, 120 Broadway.
Ford, Bacon and Davis, 115 Broadway.
Fordham University, Pelham Avenue, opposite Third Avenue.
Foreign Mission Library, 156 Fifth Avenue.
General Electric Company, 120 Broadway.
General Society of Mechanics and Tradesmen, 16-24 West 44th Street.
General Theological Seminary, 175 Ninth Avenue.
Grand Lodge, F. and A. M. of the State of New York, 49 West 23rd Street.
Grolier Club, 29 East 32nd Street.
Guaranty Club, 140 Broadway.
Guaranty Trust Company, 140 Broadway.
Haskin & Sells, 469 Fifth Avenue.
Hispanic Society of America, West 156th Street, corner Broadway.
Imbrie, Wm. Morris, & Co., 61 Broadway.
Institute of Musical Art, 120 Claremont Avenue.
Insurance Society of New York, 84 William Street.
James Black Temperance Library, 3-5 West 18th Street.
Jewish Theological Seminary of America, 531 West 123rd Street.
Kidder, Peabody & Company, 17 Wall Street.
Law Library in Brooklyn, Court House.
Library of the Engineering Societies, 29 West 39th Street.
Long Island Historical Society, Pierrepont, Corner of Clinton Street, Brooklyn.
McGraw-Hill Company, 10th Avenue and 36th Street.
Manufacturers Association of the U. S., 30 Church Street.
Medical Society of the County of Kings, 1313 Bedford Avenue, Brooklyn.
Mercantile Bank of the Americas, 38 Pine Street.
Mercantile Library Association of New York, 13 Astor Place.
Merchant's Association of New York, 233 Broadway.
Methodist Historical Society, 150 Fifth Avenue.
Metropolitan Life Insurance Company, 1 Madison Avenue.
Metropolitan Museum of Art, Central Park, opposite East 82nd Street.
Missionary Research Library, 25 Madison Avenue.
Monthly Meeting of Friends of New York, 226 East 16th Street.
Municipal Research Branch, Municipal Building, Room 512.
National Bank of Commerce in New York, 31 Nassau Street
National Workmen's Compensation, Service Bureau, 13 Park Row.
New Jersey Zinc Company, 160 Front Street.

New York Academy of Medicine, 17 West 43rd Street.
New York Botanical Gardens, South Boulevard, corner Webster Avenue.
New York Genealogical and Biographical Society, 226 West 58th Street
New York Historical Society, 170 Central Park West.
New York Law Institute, 118 Post Office Building.
New York Public Library, Fifth Avenue and 42nd Street.
New York Society Library, 109 University Place.
New York State Chamber of Commerce, 65 Liberty Street.
New York University, University Heights.
Pennsylvania Hotel, Seventh Avenue and 32nd Street.
Pennsylvania Society, 249 West 13th Street.
Pratt Institute Free Library, 220 Ryerson Street, Brooklyn.
Price, Waterhouse and Company, 54 William Street.
Prison Association of New York, 135 East 15th Street.
Public Service Commission Library, Room 1418, 154 Nassau Street.
Rockefeller Foundation, 61 Broadway.
Rockefeller Institute for Medical Research, Foot East 66th Street.
Ronald Press, 20 Vesey Street.
Russell Sage Foundation Library, Lexington Avenue, corner East 22nd Street.
Safety Institute of America, 261 Madison Avenue.
Sinclair Oil Company, 120 Broadway.
Typothetae of the City of New York, 45 East 17th Street.
Union Carbide Company, 30 East 42nd Street.
Union Theological Seminary, 120th Street and Broadway.
U. S. Rubber Company, 1790 Broadway.
Western Electric Company, 195 Broadway.
Y. M. C. A. Library, 318 West 57th Street.

This list has been compiled rather hurriedly to meet the convenience of the Conventionites. There are, no doubt, many omsisions and probably some errors. Readers of Special Libraries would confer a favor upon the Managing Editor if they would forward new names and corrections so that we may have an accurate and complete directory of libraries in New York City.

New Foreign Technical Books

Barbet, Emile.
Rectification de l'air liquide; séparation et purification des gaz de l'atmosphère. 139 p. Dunod & Pinat, Paris, 7 fr. 20.
Moniteur scientifique, Jan., 1919, sup. p.4. ⅔ col.

Batardon, Léon.
Cours pratique de comptabilité. v.1: La comptabilité en général et la comptabilité commerciale. 399 p. Dunod & Pinat, Paris, 10 tr. 80.
Le Génie civil, Dec. 28, 1918, p.520. ⅓ col.

Borel, Emile.
Leçons sur les fonctions monogènes uniformes d'une variable complexe. 165 p. 1917. Gauthier-Villars, Paris.
Bulletin of the American Mathematical Society, Feb., 1919, p.230 4½ col.

Bronlewski, Witold.
Introduction à l'étude des alliages. 230 p. 1918. Delagrave, Paris, 18 fr.
Bulletin de la Société d'Encouragement, Jan.-Feb. 1919, p. 223. ⅔ page.

Bugat-Pujol.
Statique graphique. 237 p. 1918. Dunod & Pinat, Paris, 24 fr.
Bulletin de la Société d'Encouragement, Jan.-Feb., 1919, p.227. 1½ p.

Carré, Pierre.
Précis de chimie industrielle. 464 p. 1918. J. B Baillière, Paris.
Bulletin de la Société d'Encouragement, Sept.-Oct., 1918, p.303. 2½ p.

Chambonnaud, L.
Les affaires et la méthode scientifique. 364 p. 1918. Dunod & Pinat, Paris, 18 fr.
Bulletin de la Société d'Encouragement, Sept.-Oct., 1918. p.300. 2 p.

Coffignier, Ch.
Le lithopone, historique, fabrication, analyse, avenir. 64 p. Librairie de l'Ecole Centrale, Paris.
Moniteur scientifique, Feb., 1919, sup. p.8. ⅓ col.

Dargon, Jean.
L'aviation de demain; son avenir industriel et commercial. 184 p. Berger-Levrault, Paris, 9 fr. 60.
Le Génie civil, Dec. 14, 1918, p.480. ⅔ col.

Dorgeot, E.
La mécanique appliquée, théorique, numérique et graphique. 613 p. 1918. Dunod & Pinat, Paris, 39 fr.
Bulletin de la Société d'Encouragement, Sept.-Oct., 1918, p.299. 1 p.
Revue générale des sciences pures et appliquées, Nov. 30, 1918, p.650. ½ col.

Dubrisay, René.
La chimie élémentaire des ingenieurs, des industriels et des constructeurs. 307 p. Dunod & Pinat, Paris, 12 fr.
Moniteur scientifique, Nov., 1918, sup. p.44 ½ col.
Revue générale des sciences pures et appliquées, Dec. 30, 1918, p.714. ½ col.

Escard, Jean.
L'aluminium dans l'industrie. 272 p 1918. Dunod & Pinat, Paris.
Bulletin de la Société Française des Electriciens, Nov., 1918, p.380. ⅔ p.

Escard, Jean.
Les fours électriques de laboratoire. 72 p. 1918. Dunod & Pinat, Paris.
Bulletin de la Société Française des Electriciens, Dec., 1918, p 423. 1 p.

Escard, Jean.
La nouvelle industrie de verre; emplois spéciaux; fabrication électrothermique; verres de quartz et quartz fondu. 120 p. 1918. J. Rey, Grenoble.
Revue générale des sciences pures et appliquees, Nov. 15, 1918, p.621. 1 col.

Fauchère, A.
Guide pratique d'agriculture tropicale. 158 p. 1918. Challamel, Paris.
Revue générale des sciences pures et appliquées, Jan. 15, 1919, p.27. 1 p.

Fayol, Henri.
L'éveil de l'esprit public; administration industrielle et générale. 289 p. Dunod & Pinat, Paris, 4 fr. 80.
Le Génie civil, Jan 11, 1919, p.40. ⅓ col.

Férasson, Louis.
L'industrie du fer 219 p. 1918. Payot, Paris, 4 fr. 50.
Bulletin de la Société d'Encouragement, Nov.-Dec., 1918, p 502. ⅔ p.
Le Génie civil, Nov. 30, 1918, p 440. ¼ col.
Revue générale de l'électricité, Dec. 7, 1918, p 859. ½ col.

Férasson, Louis.
La question du fer; le problème franco-allemand du fer. 167 p. 1918. Payot, Paris, 3 fr.
Revue générale des sciences pures et appliquées, Nov 15, 1918, p.621. 1 col.

Flagey, Etienne.
Comment devenir ingénieur? 245 p. Payot, Paris, 4 fr. 50.
Le Génie civil, Dec. 28, 1918, p.520. ¼ col.

Fournier, Lucien.
La parole; comment on parle; comment on téléphone. 112 p. La Bonne Presse, Paris, 2 fr.
Le Génie civil, Nov. 30, 1918, p 440. ⅓ col.

Gain, Edmond.
Précis de chimie agricole. Ed.2. 510 p. 1918. J. B. Baillière, Paris, 12 fr.
Revue générale des sciences pures et appliquées, Jan. 30, 1919, p.56. ½ p.

Grandmougin, Eugène.
L'enseignement de la chimie industrielle en France. 181 p. 1917. Dunod & Pinat, Paris, 3 fr. 85.
Revue générale de chimie pure et appliquée, April-June, 1918, p.16. ½ p.

Grandmougin, Eugène, and Grandmougin, P.
La réorganisation de l'industrie chimique en France 277 p. 1918. Dunod & Pinat, Paris, 15 fr.
Bulletin de la Société d'Encouragement, Jan.-Feb., 1919, p.226. ⅔ p.

Granjon, R., and Rosemberg, P.
Manuel pratique de soudure autogène. Ed.3. 379 p. 1918. Office Central de l'Acétylène, Paris, 7 fr. 50.
Bulletin de la Société d'Encouragement, Jan.-Feb., 1919, p.222. ½ p.

Grillon, Ph.
Technique radiologique 320 p 1919. Maloine, Paris, 2 fr.
Revue générale de l'électricité, Jan 29, 1919, p.122. 1 col.

Guillet, Léon.
L'enseignement technique supérieur à l'après-guerre. 292 p. 1918. Payot, Paris, 4 fr. 50.
Revue générale des sciences pures et appliquées, Nov. 30, 1918, p.652. ½ p.

Henderschott, F. C., and Weakly, F. E.
Employment department and employe relations. 60 p. La Salle Extension University.
Both sides, Jan., 1919, p 27. 1 col.
"Describes the organization and duties of an employment department, the function of the employment manager, his relations to other departments, the sources of the labor supply, and the scientific method of selecting people for their jobs."

Jauréguy, Pierre, and others.
L'industrie allemande et la guerre. 160 p. Dunod & Pinat, Paris, 7 fr 20.
Le Génie civil, Dec. 14, 1918, p.480. ⅓ col.
L'Industrie électrique, Dec. 10, 1918, p.457. ½ col.
Revue générale de l'électricité, Jan. 18, 1919, p 82. ½ col.

Lartigue, Alfred.
Lettres à l'Académie des Sciences sur

l'unification des forces et des phénomènes de la nature. 450 p. Doin, Paris, 6 fr.
Le Génie civil, Dec. 28, 1918, p.520 ½ col.
L'Industrie électrique, Jan. 10, 1919, p.18. ½ p.

Lecornu, Léon.
La mécanique; les idées et les faits. 304 p. 1918. Flammarion, Paris, 4 fr. 75.
Bulletin de la Société d'Encouragement, Jan.-Feb., 1919, p.221. ½ p.

Lycett, John.
Dictionnaire technique de l'aviation; Anglais-Français et Français-Anglais. 180 p. Dunod & Pinat, Paris, 7 fr. 20.
Le Génie civil, Nov. 16, 1918, p.400. ⅓ col.

McNicol, Donald.
La télégraphie en Amérique. 278 p. Gauthier-Villars, Paris, 11 fr.
Revue générale de l'électricité, Dec. 28, 1918, p.986. ⅓ col.

Malatesta, G.
Le goudron et ses détivés; extraction, distillation, analyse; tr. de l'italien par J. A. Montpellier. 164 p. Dunod & Pinat, Paris, 33 fr.
Moniteur scientifique, Nov., 1918, sup. p.44. ½ col.

Masméjean, A., and Béréhare, E.
Les moteurs à explosion dans l'aviation. v 1: Etudes préliminaires. 389 p. 1918. Dunod & Pinat, Paris, 15 fr.
Bulletin de la Société d'Encouragement, Jan.-Feb., 1919, p.228. ⅓ p.
L'Industrie électrique, Feb. 10, 1919, p.58. ⅓ p.

Montgolfier, Pierre de.
La tourbe et son utilisation. 179 p. 1918. Dunod & Pinat, Paris, 9 fr.
Bulletin de la Société d'Encouragement, Sept.-Oct., 1918, p.305. ½ p.
Moniteur scientifique, Dec., 1918, sup. p.46. ⅓ col.

Pawlowski, Auguste.
Le sous-sol de la France. Berger-Levrault, Paris, 2 fr. 40.
Iron and coal trades review, Feb 14, 1919, p 204. ⅓ col.
"Collected newspaper articles written a few years ago by Professor Pawlowski on the subsoil of France...First two chapters deal with iron and coal resources ..Other chapters deal with the other minerals to be found in the country, including the rich bauxite beds in the South of France."

Pecheux, Hector.
Les courants électriques alternatifs. 250 p. Delagrave, Paris, 12 fr. 50.
Revue générale de l'électricité, Dec. 7, 1918, p.859. ½ col.

Perrigo, Oscar.
Les tours; translated from English ed 2 by Maurice Varinois. 419 p. 1918. Dunod & Pinat, Paris, 30 fr.
Bulletin de la Société d'Encouragement, Jan.-Feb., 1919, p.226. 1 p.

Picard, Alfred.
Les chemins de fer. 856 p. 1918. Dunod & Pinat, Paris, 30 fr.
Bulletin de la Société d'Encouragement, Jan.-Feb., 1919, p.221. ½ p.

Righi, Augusto.
I fenomeni elettro-atomici sotto l'azione del magnetismo. 435 p. Zanichelli, Bologna, 21 fr
L'Industrie électrique, Dec 10, 1918, p.456. ½ p.

Rodet, Julien.
Notions d'acoustique; instruments de musique; le télharmonium. 96 p. 1917 Gauthier-Villars, Paris, 3 fr. 50.
Revue générale des sciences pures et appliquées, Jan. 15, 1919, p.26. ⅓ col.

Rouet, H., and Cotto, F.
Le contrôle technique à l'usine (méteaux). 101 p. Dunod & Pinat, Paris, 5 fr. 40.
Le Génie civil, Nov. 30, 1918, p.440. ⅓ col.
L'Industrie électrique, Dec 10, 1918, p.457. ½ col.
Revue générale de l'électricité, Feb. 22, 1919, p.282. 12 l.

Sartori, G.
La technique pratique du courant alternatif. Ed.4, v.1, translated by J. A. Montpellier 1918. Dunod & Pinat, Paris.
L'Industrie électrique, Nov. 25, 1918, p.457. 1 p.

Serieye, Emile.
L'economie du charbon dans les chaudières 105 p. Dunod & Pinat, Paris, 6 fr.
Le Génie civil, Dec. 28, 1918, p 520. ¼ col.
L'Industrie électrique, Feb. 10, 1919, p.59. ⅓ col
Revue générale de l'électricité, Jan. 4, 1919, p.2. ¼ col.

Shuey, Herbert Stanley.
Bibliography of foreign trade publications. 77 p. 1918 Ten Bosch.
Manufacturers record, Dec. 26, 1918, p 79. ⅓ col.

Soubrier, Maurice.
Les industries électriques d'hier et de demain. 214 p. 1918. Dunod & Pinat, Paris, 12 fr
Bulletin de la Société d'Encouragement, Nov.-Dec., 1918, p.503. ½ p.
Le Génie civil, Nov. 30, 1918, p.440. ¼ col
L'Industrie électrique, Dec. 10, 1918, p.457. ⅓ col.

Revue générale de l'électricité, Dec. 7, 1918, p.859. ½ p.

Suess, Eduard.
La face de la terre; translated and annotated under the direction of Emmanuel de Margerie. 1918. Colin, Paris
v.3, pt.4. p.1361-1724.
Tables générales de l'ouvrage. 258 p.
American journal of science, March, 1919, p.235. 1 p.

Swyngedauw, R.
Le courant alternatif. 564 p. Béranger, Paris, 17 fr 50.
Revue générale de l'électricité, Feb. 8, 1919, p.202. ⅔ col.

Szarvady, G.
Théorie des enroulements des machines à courant continu. 137 p. 1918. Dunod & Pinat, Paris, 10 fr. 80
Bulletin de la Société d'Encouragement, Nov.-Dec., 1918, p. 502. 1 p.
Le Génie civil, Dec 14, 1918, p.480. ⅓ col.
L'Industrie électrique, Dec. 10, 1918, p.456. ½ col.

Valbreuze, R. de.
Notions sommaires d'électrotechnique. 180 p Houille Blanche, Paris, 6 fr.
Electrician, Jan. 17, 1919, p.105. ¼ col.
"May be commended to the notice of all engineers and students who wish to obtain a concise treatment of the elementary theory of the action of dynamo-electric machinery...Is of no use to those desire simply a descriptive treatment with details of construction." A. E. Clayton.

Vigreux, Henri.
Le soufflage due verre dans les laboratoires scientifiques et industriels. 250 p. 1918. Dunod & Pinat, Paris, 12 fr.
Annales des falsifications et des fraudes, Nov.-Dec, 1918, p.391. 1 p.
Bulletin de la Société d'Encouragement, Jan.-Feb., 1919, p.222. 1 p.

"Abstracted from March, 1919, issue of Carnegie Library of Pittsburgh—Technical Book Review Index"

ANNUAL REPORT OF THE NATIONAL SAFETY COUNCIL LIBRARY.

The seriousness of America's accident problem and the resultant interest in safety work are reflected in a report of the work of the Library of the National Safety Council over the six months' period of September, 1919, to February, 1920, inclusive, which has just been made by Miss Mary B. Day, Chief of the Library staff of the Council.

This report shows that 1,790 letters seeking information on accident prevention were received by the Library, an average of 10 a day for the six months' period. It shows that 17,797 pieces of literature on safety, sanitation and other closely related subjects were distributed by the Library outside of the office of the National Safety Council, an average of 114 pieces of safety literature a day.

During the six months' period, the National Safety Council's library received 10,166 books, pamphlets, blue prints, clippings, photographs, trade catalogs and charts, all devoted to some phase of accident prevention work, an average of 65 a day. Of the latter number, 1,063 were magazines, trade journals and other periodical publications containing information on safety.

The Council has received both inquiries regarding methods of preventing accidents and information on this subject from various points in Great Britain, Netherlands, South Africa, South America, Japan, Russia and France. But even more impressive than the widespread interest in safety evidenced by these inquiries is the great mass of information on all sorts of accident problems that is constantly developing through the contributions of the 7,500 industrial plants constituting the National Safety Council.

Some idea of the extent of this information may be had from a statement in the report of the Librarian indicating that it took 140 hours, or seventeen and one-half days, of the whole time of a librarian to prepare an index to the proceedings of the 1919 Congress of the National Safety Council The proceedings are now on the presses and will be ready for distribution to members of the Council and others interested in accident prevention within the next few weeks.

1. A definite policy of achievement should be outlined. The membership should declare itself for the guidance of the incoming administration.

2. The Association should debate ways and means for effecting a closer union with the business interests of the country, and a more understanding grasp of the problems of dynamic business.

3. It should contemplate its obligations to the research bodies of business, and its capacity for co-ordinating the results of research investigations.

4. It should consider taking the necessary steps toward becoming the intermediary between the producers and consumers of published information.

5. Its annual convention program should reflect more concretely the research problems which concern our various libraries.

6. It should satisfy itself that the standards of librarianship which obtain are adequate to invest the profession with proper dignity and recognition.

7. It should determine whether librarianship and librarians are anachronisms as judged by the standards of contemporaneous businesses and professions, and whether they can be made more acceptable to the epoch in which they exist.

8. It should consider the opportunities for development offered by the library profession, and what influences it may exert to the end that every librarian may reasonably aspire to becoming a super-librarian in some field, conspicuous for superior talents and superior scholarship.

MEMBERS PLEASE NOTE.

In order that we may make cover more interesting Managing Editor will be glad to receive pictures of special library exteriors and interiors. All those who can send pictures.

BIBLIOGRAPHY

Aircraft Insurance

Aircraft Insurance Committee. Report presented by both Houses of Parliament, 1915. Pam.

Cowles, Walter G. Address before Casualty Actuarial & Statistical Society, November, 1919. Pam.

Lewis, Gwylim Hugh. Aviation and Insurance (Policy-Holder, Manchester, England, May-June, 1919).

Martin, E. Stockton IN Insurance Age, December, 1919.

Milne, W. D. Airplane Manufacture (Underwriters' Bureau of N. E. Report 171. April, 1919).

National Underwriter. Aircraft Insurance Developing Rapidly. February 22, 1920.

Quinlan, Walter I. Aviation and Insurance (Weekly Underwriter, February 24, 1920).

Snow, Elbridge G. Letter to agents Home Insurance Company. December 1, 1919.

U. S. Forest Service. Airplane forest fire patrol in California for 1919. Pam.

Weekly Underwriter. Europe leads in Aviation Insurance. February 7, 1920.

Reprinted from Insurance Societies of New York News Letter for March, 1920.

NEW MEMBERS ADDED.

Canada—Dept. of Labor.

University of Pennsylvania Library.

Miss Maude McLaughlin, Librarian, Wyoming University Agricultural College.

Toledo Scale Company, Toledo, Ohio.

Packard Motor Car Co., Motor Truck Research Div. Dorsey W. Hyde, Librarian.

NEW LIBRARIES.

Walter S. Bucklin, president of the Library Mutual Insurance Co., announces that the company is to install a library in the Boston office. It is planned to make this a very complete collection of material relating to insurance.

Union Carbide Co., New York City, is establishing a library.